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(54) Title: NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF BREAST CANCER

(57) Abstract: The invetion relates to compositions, kits, and methods for detecting, characterizing, preventing, and treatinghuman breat cancers. A variety of market genes are provided, wherein changes in the levels of expression of one or more of the marker genes is correlated with the presence of breat cancer.

NOVEL GENES, COMPOSITIONS, KITS, AND METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND THERAPY OF BREAST CANCER

RELATED APPLICATIONS

The present application claims priority to U.S. provisional patent application serial no. 60/285,163, filed on April 20, 2001, which is expressly incorporated by reference.

FIELD OF THE INVENTION

The field of the invention is breast cancer, including diagnosis, characterization, management, and therapy of breast cancer.

BACKGROUND OF THE INVENTION

The increased number of cancer cases reported in the United States, and, indeed, around the world, is a major concern. Currently there are only a handful of treatments available for specific types of cancer, and these provide no absolute guarantee of success. In order to be most effective, these treatments require not only an early detection of the malignancy, but a reliable assessment of the severity of the malignancy.

The incidence of breast cancer, a leading cause of death in women, has been gradually increasing in the United States over the last thirty years. In 1997, it was estimated that 181,000 new cases were reported in the U.S., and that 44,000 people would die of breast cancer (Parker *et al,* 1997, *CA Cancer J. Clin.* 47:5-27; Chu *et al,* 1996, *J. Nat. Cancer Inst.* 88:1571-1579). While the pathogenesis of breast cancer is unclear, transformation of normal breast epithelium to a malignant phenotype may be the result of genetic factors, especially in women under 30 (Miki *et al.*, 1994, *Science*, 266:66-71). The discovery and characterization of *BRCA1* and *BRCA2* has recently expanded our knowledge of genetic factors which can contribute to familial breast cancer. Germ-line mutations within these two loci are associated with a 50 to 85% lifetime risk of breast and/or ovarian cancer (Casey, 1997, *Curr. Opin. Oncol.* 9:88-93; Marcus *et al*, 1996, *Cancer* 77:697-709). However, it is likely that other, non-genetic factors also have a significant effect on the etiology of the disease. Regardless of its origin, breast cancer morbidity and mortality increases significantly if it is not detected early in its progression. Thus, considerable effort has focused on the early detection of cellular transformation and tumor formation in breast tissue.

Currently, the principal manner of identifying breast cancer is through detection of the presence of dense tumorous tissue. This may be accomplished to varying degrees of effectiveness by direct examination of the outside of the breast, or through mammography or other X-ray imaging methods (Jatoi, 1999, *Am. J. Surg.* 177:518-524). The latter approach is not without considerable cost, however. Every time a mammogram is taken, the patient incurs a small risk of having a breast tumor induced by the ionizing properties of the radiation used during the test. In addition, the process is expensive and the subjective interpretations of a technician can lead to imprecision, *e.g.*, one study showed major clinical disagreements for about one-third of a set of mammograms that were interpreted individually by a surveyed group of radiologists. Moreover, many women find that undergoing a mammogram is a painful experience. Accordingly, the National Cancer Institute has not recommended mammograms for women under fifty years of age, since this group is not as likely to develop breast cancers as are older women. It is compelling to note, however, that while only about 22% of breast cancers occur in women under fifty, data suggests that breast cancer is more aggressive in pre-menopausal women.

It would therefore be beneficial to provide specific methods and reagents for the diagnosis, staging, prognosis, monitoring, and treatment of diseases associated with breast cancer, or to indicate a predisposition to such for preventative measures.

SUMMARY OF THE INVENTION

The invention relates to novel genes associated with breast cancer as well as methods of assessing whether a patient is afflicted with breast cancer. The methods of the present invention comprise the step of comparing the level of expression of a marker in a patient sample, wherein the marker is listed in Table 1 and the normal level of expression of the marker in a control, *e.g.*, a sample from a patient without breast cancer. A significant difference between the level of expression of the marker in the patient sample and the normal level is an indication that the patient is afflicted with breast cancer. Preferably, a protein corresponding to the marker is a secreted protein or is predicted to correspond to a secreted protein. Alternatively, the marker can correspond to a protein having an extracellular portion, to one which is normally expressed in breast tissue at a detectable level, or both.

In one method, the marker(s) are preferably selected such that the positive predictive value of the method is at least about 10%. Also preferred are embodiments of the method wherein the marker is over- or under-expressed by at least two-fold in at least about 20% of stage 0 breast cancer patients, stage I breast cancer patients, stage IIA breast cancer patients, stage IIB breast cancer patients, stage IIIA breast cancer patients,

stage IIIB breast cancer patients, stage IV breast cancer patients, grade I breast cancer patients, grade II breast cancer patients, grade III breast cancer patients, malignant breast cancer patients, ductal carcinoma breast cancer patients, and lobular carcinoma breast cancer patients.

In one embodiment of the methods of the present invention, the patient sample is a breast tissue-associated body fluid. Such fluids include, for example, blood fluids, lymph and cystic fluids, as well as nipple aspirates. In another embodiment, the sample comprises cells obtained from the patient. In another embodiment, the patient sample is *in vivo*.

In accordance with the methods of the present invention, the level of expression of a marker gene in a sample can be assessed, for example, by detecting the level in the sample of:

- a protein encoded by the marker gene, or a polypeptide or a fragment comprising the protein (*e.g.* using a reagent, such as an antibody, an antibody derivative, or a single chain antibody, which binds specifically with the protein or a fragment thereof);
- a metabolite which is produced directly (*i.e.,* catalyzed) or indirectly by the protein encoded by the marker gene; and/or
- a polynucleotide (*e.g.* an mRNA, hnRNA, cDNA) produced by or derived from the expression of the marker gene or a fragment of the polynucleotide (*e.g.* by contacting polynucleotides obtained or derived from the sample with a substrate having affixed thereto a nucleic acid comprising the marker gene sequence or a portion of such sequence).

The methods of the present invention are useful for further diagnosing patients having an identified breast mass or symptoms associated with breast cancer. The methods of the present invention may therefore be used to diagnose breast cancer or its precursors. The methods of the present invention can further be of particular use with patients having an enhanced risk of developing breast cancer (*e.g.*, patients having a familial history of breast cancer and patients identified as having a mutant oncogene) in providing early detection of breast cancer. The methods of the present invention may further be of particular use in monitoring the efficacy of treatment of a breast cancer patient (*e.g.* the efficacy of chemotherapy).

The methods of the present invention may be performed by assessing the expression of a plurality (*e.g.* 2, 3, 5, or 10 or more) of breast cancer marker genes. According to a method involving a plurality of marker genes, the level of expression in a patient sample of each of a plurality of marker genes, including at least one that is selected from the marker genes listed in Table 1, is compared with the normal level of

expression of each of the plurality of marker genes in samples of the same type obtained from control subjects, *i.e.*, human subjects not afflicted with breast cancer. A significantly altered, preferably increased, level of expression in the patient sample of one or more of the marker genes, or some combination thereof, relative to those marker genes' expression levels in samples from control subjects, is an indication that the patient is afflicted with or has a higher than normal risk for developing breast cancer. The methods of the present invention may be practiced using one or more marker genes of the invention in combination with one or more known breast cancer marker genes.

In a preferred method of assessing whether a patient is afflicted with breast cancer (*e.g.*, new detection ("screening"), detection of recurrence, reflex testing), the method comprises comparing:

a) the level of expression of one or several breast cancer marker genes, in a patient sample, wherein at least one such gene is selected from the marker genes listed in Table 1, and

b) the normal level of expression of the same marker gene(s) in a sample from a control subject having no breast cancer.

A significantly altered expression of one or several marker genes in the patient sample relative to the normal expression levels in the sample from the control subject is an indication that the patient is afflicted with breast cancer. In preferred embodiments, a significantly increased expression of one or more marker genes in the patient sample relative to the normal expression levels in the sample from the control subject is an indication that the patient is afflicted with breast cancer.

The invention further relates to a method of assessing the efficacy of a therapy for inhibiting breast cancer in a patient. This method comprises comparing:

a) expression of one or several breast cancer marker genes in a first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, wherein at least one such marker gene is selected from the marker genes listed in Table 1, and

b) expression of the same marker gene(s) in a second sample obtained from the patient following provision of the portion of the therapy.

A significantly altered expression of the level of expression of one or several of the marker genes in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting breast cancer in the patient. In preferred embodiments, a significantly reduced expression of one or several of the marker genes in the second sample, relative to the first sample, is an indication that the therapy is efficacious.

It will be appreciated that in this method the "therapy" may be any therapy for treating breast cancer including, but not limited to, chemotherapy, immunotherapy, gene therapy, radiation therapy and surgical removal of tissue. Thus, the methods of the invention may be used to evaluate a patient before, during and after therapy, for example, to evaluate the reduction in tumor burden.

The present invention therefore further comprises a method for monitoring the progression of breast cancer in a patient, the method comprising:

a) detecting in a patient sample at a first time point, the expression of one or several breast cancer marker genes, wherein at least one such marker gene is selected from the marker genes listed in Table 1;

b) repeating step a) with patient sample obtained at a subsequent point in time; and

c) comparing the level of expression detected in steps a) and b), and therefrom monitoring the progression of breast cancer in the patient.

A significantly altered level of expression of one or several of the marker genes in the subsequent point in time, relative to the level of expression at the first time point, is an indication that the breast cancer has progressed. In preferred embodiments, a significantly increased expression of one or several of the marker genes in the subsequent point in time, relative to the first time point, is an indication that the breast cancer has progressed. Conversely, a significantly decreased expression of one or several of the marker genes in the subsequent point in time is an indication that the breast cancer has regressed.

The present invention also includes a method for assessing the aggressiveness of breast cancer, the method comprising comparing:

a) the level of expression of one or several breast cancer marker genes in a patient sample, wherein at least one such marker gene is selected from the marker genes listed in Table 1, and

b) the level of expression of the same marker gene(s) in a sample from a control subject having breast cancer which is indolent.

A significantly altered level of expression of one or several of the marker genes in the patient sample, relative to the level in the control subject sample, is an indication that the patient is afflicted with an aggressive breast cancer. In preferred embodiments, a significantly increased expression of one or more marker genes in the patient sample, relative to the expression level in the control subject sample, is an indication that the patient is afflicted with an aggressive breast cancer.

The present invention also includes a method for assessing the indolence of breast cancer, the method comprising comparing:

a) the level of expression of one or several breast cancer marker genes in a patient sample, wherein at least one such marker gene is selected from the marker genes listed in Table 1, and

b) the level of expression of the same marker gene(s) in a sample from a control subject having an aggressive breast cancer.

A significantly altered level of expression of one or several of the marker genes in the patient sample, relative to the level in the control subject sample, is an indication that the patient is afflicted with an indolent breast cancer. In preferred embodiments, a significantly decreased expression of one or more marker genes in the patient sample, relative to the expression level in the control subject sample, is an indication that the patient is afflicted with an indolent breast cancer.

The present invention further includes a method for determining whether breast cancer has metastasized or is likely to metastasize in the future, the method comprising comparing:

a) the level of expression of one or several breast cancer marker genes in a patent sample, wherein at least one such marker gene is selected from the marker genes of Table 1 and

b) the level of expression of the same marker gene(s) in a sample from a control subject having non-metastasized breast cancer.

A significantly altered level of expression in the patient sample, relative to level of expression in the control subject sample, is an indication that the patient is afflicted with breast cancer that has metastasized or is likely to metastasize in the future. In preferred embodiments, a significantly increased expression of one or more marker genes in the patient sample, relative to the expression level in the control subject sample, is an indication that the patient is afflicted with breast cancer that has metastasized or is likely to metastasize in the future.

The present invention also includes a method for determining whether breast cancer has not metastasized or is not likely to metastasize in the future, the method comprising comparing:

a) the level of expression of one or several breast cancer marker genes in a patent sample, wherein at least one such marker gene is selected from the marker genes of Table 1 and

b) the level of expression of the same marker gene(s) in a sample from a control subject having metastasized breast cancer.

A significantly altered level of expression in the patient sample, relative to the level of expression in the control subject sample, is an indication that the patient is afflicted with breast cancer that has not metastasized or is not likely to metastasize in the future. In preferred embodiments, a significantly decreased expression of one or more marker genes in the patient sample, relative to the expression level in the control subject sample, is an indication that the patient is afflicted with breast cancer that has not metastasized or is not likely to metastasize in the future.

The invention also includes a method of selecting a composition for inhibiting breast cancer in a patient. This method comprises the steps of:

a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of one or more breast cancer marker genes, including at least one from the marker genes listed within Table 1, in each of the aliquots; and

d) selecting one of the test compositions which alters the level of expression of one or more of the marker genes in the aliquot containing that test composition, relative to other test compositions.

In preferred embodiments, the test composition which significantly reduces the expression of one or more marker genes, relative to the expression in the presence of another test composition, is selected.

In addition, the invention includes a method of inhibiting breast cancer in a patient. This method comprises the steps of:

a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of one or several breast cancer marker genes, including at least one marker genes listed within Table 1, in each of the aliquots; and

d) administering to the patient at least one of the test compositions which significantly alters the level of expression of the marker gene in the aliquot containing that test composition, relative to other test compositions.

In preferred embodiments, the test composition which significantly reduces the expression of one or more marker genes, relative to the expression in the presence of another test composition, is administered to the patient.

The invention also includes a kit for assessing whether a patient is afflicted with breast cancer or its precursors. This kit comprises reagents for assessing expression of one or several breast cancer marker genes, including at least one of the marker genes listed within Table 1.

In another aspect, the invention relates to a kit for assessing the suitability of each of a plurality of compounds for inhibiting a breast cancer in a patient. The kit comprises a reagent for assessing expression of one or several breast cancer marker genes, including at least one of the marker genes listed in Table 1, and may also comprise a plurality of compounds.

In another aspect, the invention relates to a kit for assessing the presence of breast cancer cells. This kit comprises an antibody which binds specifically with a protein encoded by one of the marker genes listed in Table 1 or a polypeptide or a protein fragment comprising the protein. The kit may also comprise a plurality of antibodies, wherein the plurality binds specifically with a protein encoded by one of the marker genes listed in Table 1, a polypeptide or a protein fragment comprising the protein.

The invention also includes a kit for assessing the presence of breast cancer cells, wherein the kit comprises a nucleic acid probe. The probe binds specifically with a transcribed polynucleotide encoded by one of the marker genes listed within Table 1. The kit may also comprise a plurality of nucleic acid probes, wherein each of the probes binds specifically with a transcribed polynucleotide encoded by several different breast cancer marker genes, including at least one of the marker genes listed within Table 1.

The invention further relates to a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with breast cancer. The method comprises immunizing a mammal with a composition comprising a protein encoded by a marker gene listed within Table 1, or a polypeptide or a protein fragment comprising the protein; isolating splenocytes from the immunized mammal; fusing the isolated splenocytes with an immortalized cell line to form hybridomas; and screening individual hybridomas for production of an antibody which specifically binds with the protein or parts thereof; to isolate the hybridoma. The invention also includes an antibody produced by this method.

The invention further includes a method of assessing the carcinogenic potential of a test compound. This method comprises the steps of:

a) maintaining separate aliquots of breast cells in the presence and absence of the test compound; and

b) comparing expression of one or several breast cancer marker genes, including at least one of the marker genes of Table 1 in each of the aliquots.

A significantly altered level of expression of one or more of the marker genes in the aliquot maintained in the presence of (or exposed to) the test compound, relative to the level of expression in the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses breast carcinogenic potential. In preferred embodiments, a significantly increased expression of one of more of the marker genes in the aliquot maintained in the presence of (or exposed to) the test compound, relative to the level of expression in the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses breast carcinogenic potential.

Additionally, the invention includes a kit for assessing the breast carcinogenic potential of a test compound. The kit comprises a reagent for assessing expression of a breast cancer marker gene of Table 1 in each of the aliquots.

The invention further relates to a method of treating a patient afflicted with breast cancer and/or inhibiting breast cancer in a patient at risk for developing breast cancer. This method comprises inhibiting expression (or overexpression) of a breast cancer marker gene listing within Table 1, which is overexpressed in breast cancer.

It will be appreciated that the methods and kits of the present invention may also include known cancer marker genes including known breast cancer marker genes. It will further be appreciated that the methods and kits may be used to identify cancers other than breast cancer.

DETAILED DESCRIPTION OF THE INVENTION

The invention relates to newly discovered correlations between expression of certain marker genes and the cancerous state of breast cells. It has been discovered that the level of expression of individual marker genes and combinations of marker genes described herein correlates with the presence of breast cancer or a pre-malignant condition in a patient. Methods are provided for detecting the presence of breast cancer in a sample, the absence of breast cancer in a sample, the stage of a breast cancer, the metastatic potential of a breast cancer, the indolence or aggressiveness of the cancer, and other characteristics of breast cancer that are relevant to prevention, diagnosis, characterization and therapy of breast cancer in a patient.

Definitions

As used herein and the claims, each of the following terms has the meaning associated with it in this section.

The articles "a" and "an" are used herein to refer to one or to more than one (*i.e.* to at least one) of the grammatical object of the article. By way of example, "an element" means one element or more than one element.

The term "marker polynucleotide" is meant to include nucleotide transcript (hnRNA or mRNA) encoded by a breast cancer marker gene, preferably a marker gene listed in Table 1, or cDNA derived from the nucleotide transcript, or a segment of said transcript or cDNA.

The term "marker protein" is meant to include protein or polypeptide encoded by a breast cancer marker gene, preferably a marker gene listed in Table 1, or a polypeptide or protein fragment comprising said marker protein.

The term "gene product" is meant to include marker polynucleotide and marker protein encoded by the referenced gene.

As used herein the term "polynucleotide" is synonymous with "nucleic acid." Further a polynucleotide "corresponds to" another (a first) polynucleotide if it is related to the first polynucleotide by any of the following relationships: the second polynucleotide comprises the first polynucleotide and the second polynucleotide encodes a gene product; the second polynucleotide is the complement of the first polynucleotide and, the second polynucleotide is 5' or 3' to the first polynucleotide in cDNA, RNA, genomic DNA, or fragment of any of these polynucleotides. For example, a second polynucleotide may be a fragment of a gene that includes the first and second polynucleotides. The first and second polynucleotides are related in that they are components of the gene coding for a gene product, such as a protein or antibody. However, it is not necessary that the second polynucleotide comprises or overlaps with the first polynucleotide to be encompassed within the definition of "corresponding to" as used herein. For example, the first polynucleotide may be a fragment of a 3' untranslated region of the second polynucleotide. The first and second polynucleotide may be fragments of a gene coding for a gene product. The second polynucleotide may be an exon of the gene while the first polynucleotide may be an intron of the gene.The term "probe" refers to any molecule which is capable of selectively binding to a specifically intended target molecule, for example a marker gene of the invention. Probes can either be synthesized by one skilled in the art, or derived from appropriate biological preparations. For purposes of detection of the target molecule, probes may be specifically designed to be labeled, as described herein. Examples of molecules that can

be utilized as probes include, but are not limited to, proteins, antibodies, organic monomers, RNA, DNA, and cDNA.

A "breast-associated" body fluid is a fluid which, when in the body of a patient, contacts or passes through breast cells or into which cells, nucleic acids or proteins shed from breast cells are capable of passing. Exemplary breast-associated body fluids include blood fluids, lymph, cystic fluid, urine and nipple aspirates.

The "normal" level of expression of a marker gene is the level of expression of the marker gene in breast cells or breast-associated body fluids of a subject, *e.g.* a human, not afflicted with breast cancer.

"Over-expression" and "under-expression" of a marker gene refer to expression of the marker gene of a patient at a greater or lesser level, respectively, than normal level of expression of the marker gene (*e.g.* at least two-fold greater or lesser level).

As used herein, the term "promoter/regulatory sequence" means a nucleic acid sequence which is required for expression of a gene product operably linked to the promoter/regulatory sequence. In some instances, this sequence may be the core promoter sequence and in other instances, this sequence may also include an enhancer sequence and other regulatory elements which are required for expression of the gene product. The promoter/regulatory sequence may, for example, be one which expresses the gene product in a tissue-specific manner.

A "constitutive" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell under most or all physiological conditions of the cell.

An "inducible" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only when an inducer which corresponds to the promoter is present in the cell.

A "tissue-specific" promoter is a nucleotide sequence which, when operably linked with a polynucleotide which encodes or specifies a gene product, causes the gene product to be produced in a living human cell substantially only if the cell is a cell of the tissue type corresponding to the promoter.

A "transcribed polynucleotide" is a polynucleotide (*e.g.* an RNA, a cDNA, or an analog of one of an RNA or cDNA) which is complementary to or homologous with all or a portion of a mature RNA made by transcription of a gene, such as any of the marker genes of the invention, and normal post-transcriptional processing (*e.g.* splicing), if any, of the transcript.

"Complementary" refers to the broad concept of sequence complementarity between regions of two nucleic acid strands or between two regions of the same nucleic acid strand. It is known that an adenine residue of a first nucleic acid region is capable of forming specific hydrogen bonds ("base pairing") with a residue of a second nucleic acid region which is antiparallel to the first region if the residue is thymine or uracil. Similarly, it is known that a cytosine residue of a first nucleic acid strand is capable of base pairing with a residue of a second nucleic acid strand which is antiparallel to the first strand if the residue is guanine. A first region of a nucleic acid is complementary to a second region of the same or a different nucleic acid if, when the two regions are arranged in an antiparallel fashion, at least one nucleotide residue of the first region is capable of base pairing with a residue of the second region. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, when the first and second portions are arranged in an antiparallel fashion, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion. More preferably, all nucleotide residues of the first portion are capable of base pairing with nucleotide residues in the second portion.

"Homologous" as used herein, refers to nucleotide sequence similarity between two regions of the same nucleic acid strand or between regions of two different nucleic acid strands. Homology between two regions is expressed in terms of the proportion of nucleotide residue positions of the two regions that are occupied by the same nucleotide residue. By way of example, a region having the nucleotide sequence 5'-ATTGCC-3' and a region having the nucleotide sequence 5'-TATGGC-3' share 50% homology. Preferably, the first region comprises a first portion and the second region comprises a second portion, whereby, at least about 50%, and preferably at least about 75%, at least about 90%, or at least about 95% of the nucleotide residue positions of each of the portions are occupied by the same nucleotide residue. More preferably, all nucleotide residue positions of each of the portions are occupied by the same nucleotide residue.

A nucleic acid or protein is "fixed" to a substrate if it is covalently or non-covalently associated with the substrate such that the substrate can be rinsed with a fluid (*e.g.* standard saline citrate, pH 7.4) without a substantial fraction of the nucleic acid or protein dissociating from the substrate.

As used herein, a "naturally-occurring" nucleic acid molecule refers to an RNA or DNA molecule having a nucleotide sequence that occurs in nature.

Expression of a marker gene in a patient is "significantly" altered from the level of expression of the marker gene in a control subject if the level of expression of the marker gene in a sample from the patient differs from the level in a sample from the

control subject by an amount greater than the standard error of the assay employed to assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount. Expression of a marker gene in a patient is "significantly" higher than the level of expression of the marker gene in a control subject if the level of expression of the marker gene in a sample from the patient is greater than the level in a sample from the control subject by an amount greater than the standard error of the assay employed to assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount. Alternately, expression of the marker gene in the patient can be considered "significantly" lower than the level of expression in a control subject if the level of expression in a sample from the patient is lower than the level in a sample from the control subject by an amount greater than the standard error of the assay employed to assess expression, and preferably at least twice, and more preferably three, four, five or ten times that amount.

Breast cancer is "inhibited" if at least one symptom of the cancer is alleviated, terminated, slowed, or prevented. As used herein, breast cancer is also "inhibited" if recurrence or metastasis of the cancer is reduced, slowed, delayed, or prevented.

A kit is any manufacture (*e.g.* a package or container) comprising at least one reagent, *e.g.* a probe, for specifically detecting a marker gene or peptide of the invention. The manufacture is preferably promoted, distributed, or sold as a unit for performing the methods of the present invention.

Description

The present invention is based, in part, on the identification of proteins which are secreted or otherwise released from breast cancer cells but not from normal (*i.e.*, non-cancerous) epithelial cells. The marker genes of the invention (listed in Table 1) encode such secreted or released proteins. The presence, absence, or level of expression of one or more of these marker genes and/or their gene products in breast cells or associated fluids is correlated with the cancerous state of the tissue. In particular, the level of expression a marker gene in Table 1 is increased in breast cancer cells relative to expression in normal epithelial cells. The invention thus includes compositions, kits, and methods for assessing the cancerous state of breast cells (*e.g.* cells obtained from a human, cultured human cells, archived or preserved human cells and *in vivo* cells).

The compositions, kits, and methods of the invention have the following uses, among others:

1) assessing whether a patient is afflicted with breast cancer;
2) assessing the stage of breast cancer in a human patient;
3) assessing the grade of breast cancer in a patient;

4) assessing the benign or malignant nature of breast cancer in a patient;
5) assessing the metastatic potential of breast cancer in a patient;
6) assessing the histological type of neoplasm (*e.g.* adenocarcinoma) associated with breast cancer in a patient;
7) assessing the indolent or aggressive nature of breast cancer in a patient;
8) making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with breast cancer;
9) assessing the presence of breast cancer cells;
10) assessing the efficacy of one or more test compounds for inhibiting breast cancer in a patient;
11) assessing the efficacy of a therapy for inhibiting breast cancer in a patient;
12) monitoring the progression of breast cancer in a patient;
13) selecting a composition or therapy for inhibiting breast cancer in a patient;
14) treating a patient afflicted with breast cancer;
15) inhibiting breast cancer in a patient;
16) assessing the breast carcinogenic potential of a test compound; and
17) inhibiting breast cancer in a patient at risk for developing breast cancer.

The invention thus includes a method of assessing whether a patient is afflicted with breast cancer which includes assessing whether the patient has pre-metastasized breast cancer. This method comprises comparing the level of expression of a breast cancer marker gene in a patient sample and the normal level of expression of the marker gene in a control sample, *e.g.*, a sample from a subject having no breast cancer. A significant difference between the level of expression of the marker gene in the patient sample and the normal level is an indication that the patient is afflicted with breast cancer. The breast cancer marker gene is selected from the group consisting of the marker genes listed within Table 1. In particular, the level of expression of the marker genes in Table 1 is increased in breast cancer cells relative to expression in normal breast cells. Although one or more marker genes listed within Table 1 or their encoded proteins may have been described by others, the significance of the level of expression

of these marker genes with regard to the cancerous state of breast cells has not previously been recognized.

Any marker gene or combination of marker genes listed within Table 1, as well as any known breast cancer marker genes in combination with the marker genes set forth within Table 1, may be used in the compositions, kits, and methods of the present invention. In general, it is preferable to use marker genes for which the difference between the level of expression of the marker gene in breast cancer cells or breast-associated body fluids and the level of expression of the same marker gene in normal breast cells or breast-associated body fluids is as great as possible. Although this difference can be as small as the limit of detection of the method for assessing expression of the marker gene, it is preferred that the difference be at least greater than the standard error of the assessment method, and preferably a difference of at least 2-, 3-, 4-, 5-, 6-, 7-, 8-, 9-, 10-, 15-, 20-, 25-, 100-, 500-, 1000-fold or greater.

It is recognized that certain markers correspond to proteins which are secreted from breast cells (*i.e.* one or both of normal and cancerous cells) to the extracellular space surrounding the cells. These markers are preferably used in certain embodiments of the compositions, kits, and methods of the invention, owing to the fact that the protein corresponding to each of these markers can be detected in an breast-associated body fluid sample, which may be more easily collected from a human patient than a tissue biopsy sample. In addition, preferred *in vivo* techniques for detection of a protein corresponding to a marker of the invention include introducing into a subject a labeled antibody directed against the protein. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

Although not every marker corresponding to a secreted protein is indicated as such herein, it is a simple matter for the skilled artisan to determine whether any particular marker corresponds to a secreted protein. In order to make this determination, the protein corresponding to a marker is expressed in a test cell (*e.g.* a cell of a breast cell line), extracellular fluid is collected, and the presence or absence of the protein in the extracellular fluid is assessed (*e.g.* using a labeled antibody which binds specifically with the protein).

The following is an example of a method which can be used to detect secretion of a protein corresponding to a marker of the invention. About 8×10^5 293T cells are incubated at 37°C in wells containing growth medium (Dulbecco's modified Eagle's medium {DMEM} supplemented with 10% fetal bovine serum) under a 5% (v/v) CO_2, 95% air atmosphere to about 60-70% confluence. The cells are then transfected using a standard transfection mixture comprising 2 micrograms of DNA comprising an

expression vector encoding the protein and 10 microliters of LipofectAMINE™ (GIBCO/BRL Catalog no. 18342-012) per well. The transfection mixture is maintained for about 5 hours, and then replaced with fresh growth medium and maintained in an air atmosphere. Each well is gently rinsed twice with DMEM which does not contain methionine or cysteine (DMEM-MC; ICN Catalog no. 16-424- 54). About 1 milliliter of DMEM-MC and about 50 microcuries of Trans-^{35}S™ reagent (ICN Catalog no. 51006) are added to each well. The wells are maintained under the 5% CO_2 atmosphere described above and incubated at 37°C for a selected period. Following incubation, 150 microliters of conditioned medium is removed and centrifuged to remove floating cells and debris. The presence of the protein in the supernatant is an indication that the protein is secreted.

It will be appreciated that patient samples containing breast cells may be used in the methods of the present invention. In these embodiments, the level of expression of the marker gene can be assessed by assessing the amount (*e.g.* absolute amount or concentration) of a marker gene product (e.g., protein and RNA transcript encoded by the marker gene and fragments of the protein and RNA transcript) in a sample of breast-associated body fluid. Examples of breast-associated body fluids include blood fluids (*e.g.* whole blood, blood serum, blood having platelets removed therefrom, etc.), lymph, ascitic fluid, cystic fluid, urine and nipple aspirates. The breast-associated fluid sample can, of course, be subjected to a variety of well-known post-collection preparative and storage techniques (*e.g.* fixation, storage, freezing, lysis, homogenization, DNA or RNA extraction, ultrafiltration, concentration, evaporation, centrifugation, etc.) prior to assessing the amount of the marker gene product in the sample.

Preferred *in vivo* techniques for detection of a protein encoded by marker gene of the invention include introducing into a subject an antibody that specifically binds the protein, or a polypeptide or protein fragment comprising the protein. In certain embodiments, the antibody can be labeled with a radioactive molecule whose presence and location in a subject can be detected by standard imaging techniques.

Expression of a marker gene of the invention may be assessed by any of a wide variety of well known methods for detecting expression of a transcribed molecule or protein. Non-limiting examples of such methods include immunological methods for detection of secreted, cell-surface, cytoplasmic, or nuclear proteins, protein purification methods, protein function or activity assays, nucleic acid hybridization methods, nucleic acid reverse transcription methods, and nucleic acid amplification methods. Such method may also include physical methods such as liquid and gas chromatography, mass spectroscopy, and nuclear magnetic resonance.

In a preferred embodiment, expression of a marker gene is assessed using an antibody (*e.g.* a radio-labeled, chromophore-labeled, fluorophore-labeled, or enzyme-labeled antibody), an antibody derivative (*e.g.* an antibody conjugated with a substrate or with the protein or ligand of a protein-ligand pair {*e.g.* biotin-streptavidin}), or an antibody fragment (*e.g.* a single-chain antibody, an isolated antibody hypervariable domain, etc.) which binds specifically with a protein encoded by the marker gene or a polypeptide or a protein fragment comprising the protein, wherein the protein may have undergone none, all or a portion of its normal post-translational modification and/or proteolysis during the course of its secretion or release from breast cells, cancerous or otherwise.

In another preferred embodiment, expression of a marker gene is assessed by preparing mRNA/cDNA (*i.e.* a transcribed polynucleotide) from cells in a patient sample, and by hybridizing the mRNA/cDNA with a reference polynucleotide which comprises the marker gene sequence or its complement, or a fragment of said sequence or complement. cDNA can, optionally, be amplified using any of a variety of polymerase chain reaction methods prior to hybridization with the reference polynucleotide. Expression of one or more marker genes can likewise be detected using quantitative PCR to assess the level of RNA transcripts encoded by the marker gene(s).

In a related embodiment, a mixture of transcribed polynucleotides obtained from the sample is contacted with a substrate having fixed thereto a polynucleotide complementary to or homologous with at least a portion (*e.g.* at least 7, 10, 15, 20, 25, 30, 40, 50, 100, 500, or more nucleotide residues) of a RNA transcript encoded by a marker gene of the invention. If polynucleotides complementary to or homologous with a RNA transcript encoded by the marker gene of the invention are differentially detectable on the substrate (*e.g.* detectable using radioactivity, different chromophores or fluorophores), are fixed to different selected positions, then the levels of expression of a plurality of marker genes can be assessed simultaneously using a single substrate (*e.g.* a "gene chip" microarray of polynucleotides fixed at selected positions). When a method of assessing marker gene expression is used which involves hybridization of one nucleic acid with another, it is preferred that the hybridization be performed under stringent hybridization conditions.

Because the compositions, kits, and methods of the invention rely on detection of a difference in expression levels of one or more marker genes of the invention, it is preferable that the level of expression of the marker gene is significantly greater than the minimum detection limit of the method used to assess expression in at least one of normal breast cells and cancerous breast cells.

It is understood that by routine screening of additional patient samples for the expression levels of one or more of the marker genes of the invention, it will be realized that certain of the marker genes are over- or underexpressed in cancers of various types, including specific breast cancers, as well as other cancers such as ovarian cancers. For example, it will be confirmed that some of the marker genes of the invention are over-expressed in most (*i.e.* 50% or more) or substantially all (*i.e.* 80% or more) of breast cancer. Furthermore, it will be confirmed that certain of the markers of the invention are associated with breast cancer of various stages (*i.e.* stage 0, I, II, II, and IV breast cancers, as well as subclassifications IIA, IIB, IIIA, and IIIB, using the FIGO Stage Grouping system for primary carcinoma of the breast; (see Breast, In: *American Joint Committee on Cancer: AJCC Cancer Staging Manual.* Lippincott-Raven Publishers, 5th ed., 1997, pp. 171-180), of various histologic subtypes (*e.g.* serous, mucinous, endometroid, and clear cell subtypes, as well as subclassifications and alternate classifications adenocarcinoma, papillary adenocarcinoma, papillary cystadenocarcinoma, surface papillary carcinoma, malignant adenofibroma, cystadenofibroma, adenocarcinoma, cystadenocarcinoma, adenoacanthoma, endometrioid stromal sarcoma, mesodermal (Müllerian) mixed tumor, mesonephroid tumor, malignant carcinoma, Brenner tumor, mixed epithelial tumor, and undifferentiated carcinoma, using the WHO/FIGO system for classification of malignant breast tumors; Scully, *Atlas of Tumor Pathology*, 3d series, Washington DC), and various grades (*i.e.* grade I {well differentiated} , grade II {moderately well differentiated}, and grade III {poorly differentiated from surrounding normal tissue})).

It will thus be appreciated that as a greater number of patient samples are assessed for expression of the marker genes of the invention and the outcomes of the individual patients from whom the samples were obtained are correlated, it will also be confirmed that altered expression of certain of the marker genes of the invention are strongly correlated with malignant cancers and that altered expression of other marker genes of the invention are strongly correlated with benign tumors. The compositions, kits, and methods of the invention are thus useful for characterizing one or more of the stage, grade, histological type, metastatic potential, indolent vs. aggressive phenotype and benign/malignant nature of breast cancer in patients. In addition, these compositions, kits, and methods can be used to detect and differentiate lobular and ductal carcinoma breast cancers.

When the compositions, kits, and methods of the invention are used for characterizing one or more of the stage, grade, histological type, metastatic potential, indolent vs. aggressive phenotype and benign/malignant nature of breast cancer in a patient, it is preferred that the marker gene or panel of marker genes of the invention,

whose expression level is assessed, is selected such that a positive result is obtained in at least about 20%, and preferably at least about 40%, 60%, or 80%, and more preferably in substantially all patients afflicted with a breast cancer of the corresponding stage, grade, histological type, metastatic potential, indolent vs. aggressive phenotype or benign/malignant nature. Preferably, the marker gene or panel of marker genes of the invention is selected such that a positive predictive value (PPV) of greater than about 10% is obtained for the general population.

When a plurality of marker genes of the invention are used in the methods of the invention, the level of expression of each marker gene in a patient sample can be compared with the normal level of expression of each of the plurality of marker genes in non-cancerous samples of the same type, either in a single reaction mixture (*i.e.* using reagents, such as different fluorescent probes, for each marker gene or a mixture of similiarly labeled probes to access expression level of a plurality of marker genes whose probes are fixed to a single substrate at different positions) or in individual reaction mixtures corresponding to one or more of the marker genes. In one embodiment, a significantly enhanced level of expression of more than one of the plurality of marker genes in the sample, relative to the corresponding normal levels, is an indication that the patient is afflicted with breast cancer. When the expression level of a plurality of marker genes is assessed, it is preferred that the expression level of 2, 3, 4, 5, 8, 10, 12, 15, 20, 30, or 40 or more individual marker genes is assessed.

In order to maximize the sensitivity of the compositions, kits, and methods of the invention (*i.e.* by interference attributable to cells of non-breast origin in a patient sample), it is preferable that the marker gene of the invention whose expression level is examined therein be a marker gene which is tissue specific, *e.g.,* normally not expressed in non-breast tissue.

There are only a small number of marker genes whose expression are known to be associated with breast cancers (*e.g. BRCA1* and *BRCA2*). These marker genes are not, of course, included among the marker genes of the invention, although they may be used together with one or more marker genes of the invention in a panel of marker genes, for example. It is well known that certain types of genes, such as oncogenes, tumor suppressor genes, growth factor-like genes, protease-like genes, and protein kinase-like genes are often involved with development of cancers of various types. Thus, among the marker genes of the invention, use of those which encode proteins which resemble known secreted proteins such as growth factors, proteases and protease inhibitors are preferred.

Known oncogenes and tumor suppressor genes include, for example, *abl*, *abr*, *akt2*, *apc*, *bcl2α*, *bcl2β*, *bcl3*, *bcr*, *brca1*, *brca2*, *cbl*, *ccnd1*, *cdc42*, *cdk4*, *crk- II*, *csf1r/fms*, *dbl*, *dcc*, *dpc4/smad4*, *e-cad*, *e2f1/rbap*, *egfr/erbb-1*, *elk1*, *elk3*, *eph*, *erg*, *ets1*, *ets2*, *fer*, *fgr/src2*, *fli1/ergb2*, *fos*, *fps/fes*, *fra1*, *fra2*, *fyn*, *hck*, *hek*, *her2/erbb- 2/neu*, *her3/erbb-3*, *her4/erbb-4*, *hras1*, *hst2*, *hstf1*, *igfbp2*, *ink4a*, *ink4b*, *int2/fgf3*, *jun*, *junb*, *jund*, *kip2*, *kit*, *kras2a*, *kras2b*, *lck*, *lyn*, *mas*, *max*, *mcc*, *mdm2*, *met*, *mlh1*, *mmp10*, *mos*, *msh2*, *msh3*, *msh6*, *myb*, *myba*, *mybb*, *myc*, *mycl1*, *mycn*, *nf1*, *nf2*, *nme2*, *nras*, *p53*, *pdgfb*, *phb*, *pim1*, *pms1*, *pms2*, *ptc*, *pten*, *raf1*, *rap1a*, *rb1*, *rel*, *ret*, *ros1*, *ski*, *src1*, *tal1*, *tgfbr2*, *tgfb3*, *tgfbr3*, *thra1*, *thrb*, *tiam1*, *timp3*, *tjp1*, *tp53*, *trk*, *vav*, *vhl*, *vil2*, *waf1*, *wnt1*, *wnt2*, *wt1*, and *yes1* (Hesketh, 1997, In: *The Oncogene and Tumour Suppressor Gene Facts Book*, 2nd Ed., Academic Press; Fishel *et al.*, 1994, *Science* 266:1403-1405).

Known growth factors include platelet-derived growth factor alpha, platelet-derived growth factor beta (simian sarcoma viral {v-sis) oncogene homolog), thrombopoietin (myeloproliferative leukemia virus oncogene ligand, megakaryocyte growth and development factor), erythropoietin, B cell growth factor, macrophage stimulating factor 1 (hepatocyte growth factor-like protein), hepatocyte growth factor (hepapoietin A), insulin-like growth factor 1 (somatomedia C), hepatoma-derived growth factor, amphiregulin (schwannoma-derived growth factor), bone morphogenetic proteins 1, 2, 3, 3 beta, and 4, bone morphogenetic protein 7 (osteogenic protein 1), bone morphogenetic protein 8 (osteogenic protein 2), connective tissue growth factor, connective tissue activation peptide 3, epidermal growth factor (EGF), teratocarcinoma-derived growth factor 1, endothelin, endothelin 2, endothelin 3, stromal cell-derived factor 1, vascular endothelial growth factor (VEGF), VEGF-B, VEGF-C, placental growth factor (vascular endothelial growth factor-related protein), transforming growth factor alpha, transforming growth factor beta 1 and its precursors, transforming growth factor beta 2 and its precursors, fibroblast growth factor 1 (acidic), fibroblast growth factor 2 (basic), fibroblast growth factor 5 and its precursors, fibroblast growth factor 6 and its precursors, fibroblast growth factor 7 (keratinocyte growth factor), fibroblast growth factor 8 (androgen-induced), fibroblast growth factor 9 (glia-activating factor), pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1), brain-derived neurotrophic factor, and recombinant glial growth factor 2.

Known proteases include interleukin-1 beta convertase and its precursors, Mch6 and its precursors, Mch2 isoform alpha, Mch4, Cpp32 isoform alpha, Lice2 gamma cysteine protease, Ich-1S, Ich-1L, Ich-2 and its precursors, TY protease, matrix metalloproteinase 1 (interstitial collagenase), matrix metalloproteinase 2 (gelatinase A, 72kD gelatinase, 72kD type IV collagenase), matrix metalloproteinase 7 (matrilysin), matrix metalloproteinase 8 (neutrophil collagenase), matrix metalloproteinase 12

(macrophage elastase), matrix metalloproteinase 13 (collagenase 3), metallopeptidase 1, cysteine-rich metalloprotease (disintegrin) and its precursors, subtilisin-like protease Pc8 and its precursors, chymotrypsin, snake venom-like protease, cathepsin l, cathepsin D (lysosomal aspartyl protease), stromelysin, aminopeptidase N, plasminogen, tissue plasminogen activator, plasminogen activator inhibitor type II, and urokinase-type plasminogen activator.

It is recognized that the compositions, kits, and methods of the invention will be of particular utility to patients having an enhanced risk of developing breast cancer and their medical advisors. Patients recognized as having an enhanced risk of developing breast cancer include, for example, patients having a familial history of breast cancer, patients identified as having a mutant oncogene (*i.e.* at least one allele), and patients determined through any other established medical criteria to be at risk for cancer or other malignancy.

The level of expression of a marker gene in normal (*i.e.* non-cancerous) human breast tissue can be assessed in a variety of ways. In one embodiment, this normal level of expression is assessed by assessing the level of expression of the marker gene in a portion of breast cells which appears to be non-cancerous and by comparing this normal level of expression with the level of expression in a portion of the breast cells which is suspected of being cancerous. For example, when mammography or another medical procedure reveals the presence of a lump in the patient's breast, the normal level of expression of a marker gene may be assessed using a non-affected portion of the breast and this normal level of expression may be compared with the level of expression of the same marker gene in an affected portion (*i. e.* the lump) of the breast. Alternately, and particularly as further information becomes available as a result of routine performance of the methods described herein, population-average values for normal expression of the marker genes of the invention may be used. In other embodiments, the 'normal' level of expression of a marker gene may be determined by assessing expression of the marker gene in a patient sample obtained from a non-cancer-afflicted patient, from a patient sample obtained from a patient before the suspected onset of breast cancer in the patient, from archived patient samples, and the like.

The invention includes compositions, kits, and methods for assessing the presence of breast cancer cells in a sample (*e.g.* an archived tissue sample or a sample obtained from a patient). These compositions, kits, and methods are substantially the same as those described above, except that, where necessary, the compositions, kits, and methods are adapted for use with samples other than patient samples. For example, when the sample to be used is a parafinized, archived human tissue sample, it can be necessary to adjust the ratio of compounds in the compositions of the invention, in the

kits of the invention, or the methods used to assess levels of marker gene expression in the sample. Such methods are well known in the art and within the skill of the ordinary artisan.

The invention includes a kit for assessing the presence of breast cancer cells (*e.g.* in a sample such as a patient sample). The kit comprises a plurality of reagents, each of which is capable of binding specifically with a protein or nucleic acid encoded by a marker gene of the invention. Suitable reagents for binding with a protein encoded by a marker gene of the invention include antibodies, antibody derivatives, antibody fragments, and the like. Additional reagents for specifically binding with a protein encoded by a marker gene include any natural ligands of the protein and derivatives of such ligands. Suitable reagents for binding with a nucleic acid encoded by a marker gene (*e.g.* an hnRNA, a spliced mRNA, a cDNA corresponding to the mRNA, or the like) include complementary nucleic acids. For example, the nucleic acid reagents may include oligonucleotides (labeled or non-labeled) fixed to a substrate, labeled oligonucleotides not bound with a substrate, pairs of PCR primers, molecular beacon probes, and the like.

The kit of the invention may optionally comprise additional components useful for performing the methods of the invention. By way of example, the kit may comprise fluids (*e.g.* SSC buffer) suitable for binding an antibody with a protein with which it specifically binds or, for annealing complementary nucleic acids one or more sample compartments, instructional material which describes performance of a method of the invention, a sample of normal breast cells, a sample of breast cancer cells, and the like.

The invention also includes a method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with breast cancer. In this method, a composition comprising a protein encoded by a marker gene or a polypeptide or protein fragment of the protein is used to immunize a vertebrate, preferably a mammal such as a mouse, rat, rabbit, or sheep. The vertebrate may optionally (and preferably) be immunized at least one additional time with the composition, so that the vertebrate exhibits a robust immune response to the protein or parts thereof . Splenocytes are isolated from the immunized vertebrate and fused with an immortalized cell line to form hybridomas, using any of a variety of methods well known in the art. Hybridomas formed in this manner are then screened using standard methods to identify one or more hybridomas which produce an antibody which specifically binds with the protein or part thereof. The invention also includes hybridomas made by this method and antibodies made using such hybridomas. An antibody of the invention may also be used as a therapeutic agent for treating cancers, particular breast cancers.

The invention also includes a method of assessing the efficacy of a test compound for inhibiting breast cancer cells. As described above, differences in the level of expression of the marker genes of the invention correlate with the cancerous state of breast cells. Although it is recognized that changes in the levels of expression of certain of the marker genes of the invention likely result from the cancerous state of breast cells, it is likewise recognized that changes in the levels of expression of other of the marker genes of the invention induce, maintain, and promote the cancerous state of those cells. Thus, compounds which inhibit breast cancer in a patient will cause the level of expression of one or more of the marker genes of the invention to change to a level nearer the normal level of expression for that marker gene (*i.e.* the level of expression for the marker gene in non-cancerous breast cells).

This method thus comprises comparing expression of a marker gene in a first breast cell sample and maintained in the presence of the test compound and expression of the marker gene in a second breast cell sample and maintained in the absence of the test compound. A significantly altered level of expression of a marker gene listed within Table 1 is an indication that the test compound inhibits breast cancer. The breast cell samples may, for example, be aliquots of a single sample of normal breast cells obtained from a patient, pooled samples of normal breast cells obtained from a patient, cells of a normal breast cell line, aliquots of a single sample of breast cancer cells obtained from a patient, pooled samples of breast cancer cells obtained from a patient, cells of a breast cancer cell line, or the like. In one embodiment, the samples are breast cancer cells obtained from a patient and a plurality of compounds known to be effective for inhibiting various breast cancers are tested in order to identify the compound which is likely to best inhibit the breast cancer in the patient.

This method may likewise be used to assess the efficacy of a therapy for inhibiting breast cancer in a patient. In this method, the level of expression of one or more marker genes of the invention in a pair of samples (one subjected to the therapy, the other not subjected to the therapy) is assessed. As with the method of assessing the efficacy of test compounds, if the therapy induces a significant alteration in the level of expression of a marker gene listed within Table 1 then the therapy is efficacious for inhibiting breast cancer. As above, if samples from a selected patient are used in this method, then alternative therapies can be assessed *in vitro* in order to select a therapy most likely to be efficacious for inhibiting breast cancer in the patient.

As described herein, breast cancer in patients is associated with an altered level of expression of one or more marker genes listed within Table 1. While, as discussed above, some of these changes in expression level result from occurrence of the breast cancer, others of these changes induce, maintain, and promote the cancerous state of

breast cancer cells. Thus, breast cancer characterized by an altered level of expression of one or more marker genes listed within Table 1 can be controlled or suppressed by altering expression of those marker genes.

Expression of a marker gene listed within Table 1 can be inhibited in a number of ways generally known in the art. For example, an antisense oligonucleotide can be provided to the breast cancer cells in order to inhibit transcription, translation, or both, of the marker gene(s). Alternately, a polynucleotide encoding an antibody, an antibody derivative, or an antibody fragment, and operably linked with an appropriate promoter/regulator region, can be provided to the cell in order to generate intracellular antibodies which will inhibit the function or activity of the protein encoded by the marker gene(s). Using the methods described herein, a variety of molecules, particularly including molecules sufficiently small that they are able to cross the cell membrane, can be screened in order to identify molecules which inhibit expression of the marker gene(s). The compound so identified can be provided to the patient in order to inhibit expression of the marker gene(s) in the breast cancer cells of the patient.

Expression of a marker gene listed within Table 1 can be enhanced in a number of ways generally known in the art. For example, a gene construct comprising the coding region of the marker gene operably linked with an appropriate promoter/regulator region can be provided to breast cancer cells of the patient in order to induce enhanced expression of the protein (and mRNA) encoded by the marker gene. Expression of the protein can be enhanced by providing the protein (*e.g.* directly or by way of the bloodstream or another breast-associated fluid) to breast cancer cells in the patient.

As described above, the cancerous state of human breast cells is correlated with changes in the levels of expression of the marker genes of the invention. Thus, compounds which alter expression of one or more of the marker genes listed in within Table 1 can induce breast cell carcinogenesis. The invention thus includes a method for assessing the human breast cell carcinogenic potential of a test compound. This method comprises maintaining separate aliquots of human breast cells in the presence and absence of the test compound. Expression of a marker gene of the invention in each of the aliquots is compared. A significant alteration in the level of expression of a marker gene listed within Table 1 in the aliquot maintained in the presence of the test compound (relative to the aliquot maintained in the absence of the test compound) is an indication that the test compound possesses human breast cell carcinogenic potential. The relative carcinogenic potentials of various test compounds can be assessed by comparing the degree of enhancement or inhibition of the level of expression of the

relevant marker genes, by comparing the number of marker genes for which the level of expression is enhanced or inhibited, or by comparing both.

Various aspects of the invention are described in further detail in the following subsections.

I. Isolated Nucleic Acid Molecules

One aspect of the invention pertains to isolated nucleic acid molecules that correspond to a marker gene of the invention. Such nucleic acid molecules comprise sequences of RNA transcripts encoded by the marker gene or portions of such transcripts. Isolated nucleic acids of the invention also include nucleic acid molecules sufficient for use as hybridization probes to identify of RNA transcripts encoded by the marker gene or portions of such transcripts, and fragments of such nucleic acid molecules, *e.g.*, those suitable for use as PCR primers for the amplification or mutation of nucleic acid molecules. As used herein, the term "nucleic acid molecule" is intended to include DNA molecules (*e.g.*, cDNA or genomic DNA) and RNA molecules (*e.g.*, mRNA) and analogs of the DNA or RNA generated using nucleotide analogs. The nucleic acid molecule can be single-stranded or double-stranded, but preferably is double-stranded DNA.

The invention also encompasses polynucleotides which differ from that of the polynucleotides described herein, but which produce the same phenotypic effect, such as an allelic variant. These altered, but phenotypically equivalent polynucleotides are referred to as "equivalent nucleic acids." This invention also encompasses polynucleotides characterized by changes in non-coding regions that do not alter the polypeptide produced therefrom when compared to the polynucleotide herein. This invention further encompasses polynucleotides, which hybridize to the polynucleotides of the subject invention under conditions of moderate or high stringency. Alternatively, the polynucleotides are at least 85%, or at least 90%, or more preferably, greater or equal to 95% identical as determined by a sequence alignment program when run under default parameters.

An "isolated" nucleic acid molecule is one which is separated from other nucleic acid molecules which are present in the natural source of the nucleic acid molecule. Preferably, an "isolated" nucleic acid molecule comprises a protein-coding sequence and is free of sequences which naturally flank the coding sequence in the genomic DNA of the organism from which the nucleic acid is derived. For example, in various embodiments, the isolated nucleic acid molecule can contain less than about 5 kB, 4 kB, 3 kB, 2 kB, 1 kB, 0.5 kB or 0.1 kB of nucleotide sequences which naturally flank the nucleic acid molecule in genomic DNA of the cell from which the nucleic acid is

derived. Moreover, an "isolated" nucleic acid molecule, such as a cDNA molecule, can be substantially free of other cellular material, or culture medium when produced by recombinant techniques, or substantially free of chemical precursors or other chemicals when chemically synthesized.

A nucleic acid molecule of the present invention, *e.g.*, a nucleotide transcript encoded by a marker gene listed in Table 1, can be isolated using standard molecular biology techniques. Nucleic acid molecule of the present invention also encompass the marker genes of the invention, which can be isolated using standard hybridization and cloning techniques (*e.g.*, as described in Sambrook *et al.*, ed., *Molecular Cloning: A Laboratory Manual, 2nd ed.,* Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989).

A process for identifying a larger fragment or the full-length coding sequence of a marker gene of the present invention is thus also provided. Any conventional recombinant DNA techniques applicable for isolating polynucleotides may be employed. One such method involves the 5'-RACE-PCR technique, in which the poly-A mRNA that contains the coding sequence of particular interest is first reverse transcribed with a 3'-primer comprising a sequence disclosed herein. The newly synthesized cDNA strand is then tagged with an anchor primer with a known sequence, which preferably contains a convenient cloning restriction site attached at the 5'end. The tagged cDNA is then amplified with the 3'-primer (or a nested primer sharing sequence homology to the internal sequences of the coding region) and the 5'-anchor primer. The amplification may be conducted under conditions of various levels of stringency to optimize the amplification specificity. 5'-RACE-PCR can be readily performed using commercial kits (available from, *e.g.*, BRL Life Technologies Inc., Clontech) according to the manufacturer's instructions.

Isolating the complete coding sequence of a gene can also be carried out in a hybridization assay using a suitable probe. The probe preferably comprises at least 10 nucleotides, and more preferably exhibits sequence homology to the polynucleotides of the marker genes of the present invention. Other high throughput screens for cDNAs, such as those involving gene chip technology, can also be employed in obtaining the complete cDNA sequence.

In addition, databases exist that reduce the complexity of ESTs by assembling contiguous EST sequences into tentative genes. For example, TIGR has assembled human ESTs into a database called THC for tentative human consensus sequences. The THC database allows for a more definitive assignment compared to ESTs alone. Software programs exist (TIGR assembler and TIGEM EST assembly machine and

contig assembly program (see Huang, X ., 1996, *Genomes* 33:21-23)) that allow for assembling ESTs into contiguous sequences from any organism.

Alternatively, mRNA from a sample preparation is used to construct cDNA library in the ZAP Express vector following the procedure described in Velculescu *et al.*, 1997, *Science* 270:484. The ZAP Express cDNA synthesis kit (Stratagene) is used accordingly to the manufacturer's protocol. Plates containing 250 to 2000 plaques are hybridized as described in Rupert *et al.*, 1988, *Mol. Cell. Bio.* 8:3104 to oligonucleotide probes with the same conditions previously described for standard probes except that the hybridization temperature is reduced to a room temperature. Washes are performed in 6X standard-saline-citrate 0.1% SDS for 30 minutes at room temperature. The probes are labeled with ^{32}P-ATP trough use of T4 polynucleotide kinase.

A partial cDNA (3' fragment) can be isolated by 3' directed PCR reaction. This procedure is a modification of the protocol described in Polyak *et al.*, 1997, *Nature* 389:300. Briefly, the procedure uses SAGE tags in PCR reaction such that the resultant PCR product contains the SAGE tag of interest as well as additional cDNA, the length of which is defined by the position of the tag with respect to the 3' end of the cDNA. The cDNA product derived from such a transcript driven PCR reaction can be used for many applications.

RNA from a source to express the cDNA corresponding to a given tag is first converted to double-stranded cDNA using any standard cDNA protocol. Similar conditions used to generate cDNA for SAGE library construction can be employed except that a modified oligo-dT primer is used to derive the first strand synthesis. For example, the oligonucleotide of composition 5'-B-TCC GGC GCG CCG TTT TCC CAG TCA CGA(30)-3', contains a poly-T stretch at the 3' end for hybridization and priming from poly-A tails, an M13 priming site for use in subsequent PCR steps, a 5' Biotin label (B) for capture to strepavidin-coated magnetic beads, and an AscI restriction endonuclease site for releasing the cDNA from the strepavidin-coated magnetic beads. Theoretically, any sufficiently-sized DNA region capable of hybridizing to a PCR primer can be used as well as any other 8 base pair recognizing endonuclease.

cDNA constructed utilizing this or similar modified oligo-dT primer is then processed as described in U.S. Patent No. 5,695,937 up until adapter ligation where only one adapter is ligated to the cDNA pool. After adapter ligation, the cDNA is released from the streptavidin-coated magnetic beads and is then used as a template for cDNA amplification.

Various PCR protocols can be employed using PCR priming sites within the 3' modified oligo-dT primer and the SAGE tag. The SAGE tag-derived PCR primer employed can be of varying length dictated by 5' extension of the tag into the adaptor sequence. cDNA products are now available for a variety of applications.

This technique can be further modified by: (1) altering the length and/or content of the modified oligo-dT primer; (2) ligating adaptors other than that previously employed within the SAGE protocol; (3) performing PCR from template retained on the streptavidin-coated magnetic beads; and (4) priming first strand cDNA synthesis with non-oligo-dT based primers.

Gene trapper technology can also be used. The reagents and manufacturer's instructions for this technology are commercially available from Life Technologies, Inc., Gaithsburg, Maryland. Briefly, a complex population of single-stranded phagemid DNA containing directional cDNA inserts is enriched for the target sequence by hybridization in solution to a biotinylated oligonucleotide probe complementary to the target sequence. The hybrids are captured on streptavidin-coated paramagnetic beads. A magnet retrieves the paramagnetic beads from the solution, leaving nonhybridized single-stranded DNAs behind. Subsequently, the captured single-stranded DNA target is released from the biotinylated oligonucleotide. After release, the cDNA clone is further enriched by using a nonbiotinylated target oligonucleotide to specifically prime conversion of the single-stranded DNA. Following transformation and plating, typically 20% to 100% of the colones represent the cDNA clone of interest. To identify the desired cDNA clone, the colones may be screened by colony hybridization using the ^{32}P-labeled oligonucleotide, or alternatively by DNA sequencing and alignment of all sequences obtained from numerous clones to determine a consensus sequence.

A nucleic acid molecule of the invention can be amplified using cDNA, mRNA, or genomic DNA as a template and appropriate oligonucleotide primers according to standard PCR amplification techniques. The nucleic acid so amplified can be cloned into an appropriate vector and characterized by DNA sequence analysis. Furthermore, oligonucleotides corresponding to all or a portion of a nucleic acid molecule of the invention can be prepared by standard synthetic techniques, *e.g.*, using an automated DNA synthesizer.

In another preferred embodiment, an isolated nucleic acid molecule of the invention comprises a nucleotide sequence of a RNA transcript encoded by a marker gene of the invention or a complement of said sequence. A nucleic acid molecule which is complementary to a given nucleotide sequence is one which is sufficiently complementary to the given nucleotide sequence that it can hybridize to the given nucleotide sequence thereby forming a stable duplex.

Moreover, a nucleic acid molecule of the invention can comprise only a portion of the nucleotide sequence (RNA or cDNA) of a RNA transcript encoded by a marker gene of the invention or a complement of said sequence. Such nucleic acids can be used, for example, as a probe or primer. The probe/primer typically is used as one or more substantially purified oligonucleotides. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least about 7, preferably about 15, more preferably about 25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, or 400 or more consecutive nucleotides of a nucleic acid of the invention.

Probes based on the sequence of a nucleic acid molecule of the invention can be used to detect transcripts or genomic sequences of one or more marker genes of the invention. The probe comprises a label group attached thereto, *e.g.*, a radioisotope, a fluorescent compound, an enzyme, or an enzyme co-factor. Such probes can be used as part of a diagnostic test kit for identifying cells or tissues which mis-express the protein, such as by measuring levels of a nucleic acid molecule encoding the protein in a sample of cells from a subject, *e.g.*, detecting mRNA levels or determining whether a gene encoding the protein has been mutated or deleted.

The invention further encompasses nucleic acid molecules that differ, due to degeneracy of the genetic code, from the nucleotide sequence of nucleic acids encoding a protein which corresponds to a marker gene of the invention, and thus encode the same protein.

In addition to the nucleotide sequences described in the GenBank and IMAGE Consortium database records described herein, and in Table 1, it will be appreciated by those skilled in the art that DNA sequence polymorphisms that lead to changes in the amino acid sequence can exist within a population (*e.g.*, the human population). Such genetic polymorphisms can exist among individuals within a population due to natural allelic variation. An allele is one of a group of genes which occur alternatively at a given genetic locus. In addition, it will be appreciated that DNA polymorphisms that affect RNA expression levels can also exist that may affect the overall expression level of that gene (*e.g.*, by affecting regulation or degradation).

As used herein, the phrase "allelic variant" refers to a nucleotide sequence which occurs at a given locus or to a polypeptide encoded by the nucleotide sequence.

As used herein, the terms "gene" and "recombinant gene" refer to nucleic acid molecules comprising an open reading frame encoding a polypeptide by a marker gene of the invention. Such natural allelic variations can typically result in 0.1-0.5% variance in the nucleotide sequence of a given gene. Alternative alleles can be identified by sequencing the gene of interest in a number of different individuals. This can be readily carried out by using hybridization probes to identify the same genetic locus in a variety

of individuals. Any and all such nucleotide variations and resulting amino acid polymorphisms or variations that are the result of natural allelic variation and that do not alter the functional activity are intended to be within the scope of the invention.

In another embodiment, an isolated nucleic acid molecule of the invention is at least 7, 15, 20, 25, 30, 40, 60, 80, 100, 150, 200, 250, 300, 350, 400, 450, 550, 650, 700, 800, 900, 1000, 1200, 1400, 1600, 1800, 2000, 2200, 2400, 2600, 2800, 3000, 3500, 4000, 4500, or more nucleotides in length and hybridizes under stringent conditions to a RNA transcript of a marker gene of the invention or a portion of said transcript or a cDNA corresponding to said transcript or portion thereof. As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences at least 75% (80%, 85%, preferably 90%) identical to each other typically remain hybridized to each other. Such stringent conditions are known to those skilled in the art and can be found in sections 6.3.1-6.3.6 of *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989). A preferred, non-limiting example of stringent hybridization conditions for annealing two single-stranded DNA each of which is at least about 100 bases in length and/or for annealing a single-stranded DNA and a single-stranded RNA each of which is at least about 100 bases in length, are hybridization in 6X sodium chloride/sodium citrate (SSC) at about 45°C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65°C. Further preferred hybridization conditions are taught in Lockhart, *et al.*, Nature Biotechnology, Volume 14, 1996 August:1675-1680; Breslauer, *et al.*, Proc. Natl. Acad. Sci. USA, Volume 83, 1986 June: 3746-3750; Van Ness, *et al.*, Nucleic Acids Research, Volume 19, No. 19, 1991 September: 5143-5151; McGraw, *et al.*, BioTechniques, Volume 8, No. 6 1990: 674-678; and Milner, *et al.*, Nature Biotechnology, Volume 15, 1997 June: 537-541, all expressly incorporated by reference.

In addition to naturally-occurring allelic variants of a nucleic acid molecule of the invention that can exist in the population, the skilled artisan will further appreciate that sequence changes can be introduced by mutation thereby leading to changes in the amino acid sequence of the encoded protein, without altering the biological activity of the protein encoded thereby. For example, one can make nucleotide substitutions leading to amino acid substitutions at "non-essential" amino acid residues. A "non-essential" amino acid residue is a residue that can be altered from the wild-type sequence without altering the biological activity, whereas an "essential" amino acid residue is required for biological activity. For example, amino acid residues that are not conserved or only semi-conserved among homologs of various species may be non-essential for activity and thus would be likely targets for alteration. Alternatively, amino

acid residues that are conserved among the homologs of various species (*e.g.*, murine and human) may be essential for activity and thus would not be likely targets for alteration.

Accordingly, another aspect of the invention pertains to nucleic acid molecules encoding a polypeptide of the invention that contain changes in amino acid residues that are not essential for activity. Such polypeptides differ in amino acid sequence from the naturally-occurring proteins encoded by the marker genes of the invention, yet retain biological activity. In one embodiment, such a protein has an amino acid sequence that is at least about 40% identical, 50%, 60%, 70%, 80%, 90%, 95%, or 98% identical to the amino acid sequence of one of the proteins encoded by the marker genes of the invention.

An isolated nucleic acid molecule encoding a variant protein can be created by introducing one or more nucleotide substitutions, additions or deletions into the nucleotide sequence of nucleic acids of the invention, such that one or more amino acid residue substitutions, additions, or deletions are introduced into the encoded protein. Mutations can be introduced by standard techniques, such as site-directed mutagenesis and PCR-mediated mutagenesis. Preferably, conservative amino acid substitutions are made at one or more predicted non-essential amino acid residues. A "conservative amino acid substitution" is one in which the amino acid residue is replaced with an amino acid residue having a similar side chain. Families of amino acid residues having similar side chains have been defined in the art. These families include amino acids with basic side chains (*e.g.*, lysine, arginine, histidine), acidic side chains (*e.g.*, aspartic acid, glutamic acid), uncharged polar side chains (*e.g.*, glycine, asparagine, glutamine, serine, threonine, tyrosine, cysteine), non-polar side chains (*e.g.*, alanine, valine, leucine, isoleucine, proline, phenylalanine, methionine, tryptophan), beta-branched side chains (*e.g.*, threonine, valine, isoleucine) and aromatic side chains (*e.g.*, tyrosine, phenylalanine, tryptophan, histidine). Alternatively, mutations can be introduced randomly along all or part of the coding sequence, such as by saturation mutagenesis, and the resultant mutants can be screened for biological activity to identify mutants that retain activity. Following mutagenesis, the encoded protein can be expressed recombinantly and the activity of the protein can be determined.

The present invention encompasses antisense nucleic acid molecules, *i.e.*, molecules which are complementary to a sense nucleic acid of the invention, *e.g.*, complementary to the coding strand of a double-stranded cDNA molecule corresponding to a marker gene of the invention or complementary to an mRNA sequence corresponding to a marker gene of the invention. Accordingly, an antisense nucleic acid of the invention can hydrogen bond to (*i.e.* anneal with) a sense nucleic acid

of the invention. The antisense nucleic acid can be complementary to an entire coding strand, or to only a portion thereof, *e.g.*, all or part of the protein coding region (or open reading frame). An antisense nucleic acid molecule can also be antisense to all or part of a non-coding region of the coding strand of a nucleotide sequence encoding a polypeptide of the invention. The non-coding regions ("5' and 3' untranslated regions") are the 5' and 3' sequences which flank the coding region and are not translated into amino acids.

An antisense oligonucleotide can be, for example, about 5, 10, 15, 20, 25, 30, 35, 40, 45, or 50 or more nucleotides in length. An antisense nucleic acid of the invention can be constructed using chemical synthesis and enzymatic ligation reactions using procedures known in the art. For example, an antisense nucleic acid (*e.g.*, an antisense oligonucleotide) can be chemically synthesized using naturally occurring nucleotides or variously modified nucleotides designed to increase the biological stability of the molecules or to increase the physical stability of the duplex formed between the antisense and sense nucleic acids, *e.g.*, phosphorothioate derivatives and acridine substituted nucleotides can be used. Examples of modified nucleotides which can be used to generate the antisense nucleic acid include 5-fluorouracil, 5-bromouracil, 5-chlorouracil, 5-iodouracil, hypoxanthine, xanthine, 4-acetylcytosine, 5-(carboxyhydroxylmethyl) uracil, 5-carboxymethylaminomethyl-2-thiouridine, 5-carboxymethylaminomethyluracil, dihydrouracil, beta-D-galactosylqueosine, inosine, N6-isopentenyladenine, 1-methylguanine, 1-methylinosine, 2,2-dimethylguanine, 2-methyladenine, 2-methylguanine, 3-methylcytosine, 5-methylcytosine, N6-adenine, 7-methylguanine, 5-methylaminomethyluracil, 5-methoxyaminomethyl-2-thiouracil, beta-D-mannosylqueosine, 5'-methoxycarboxymethyluracil, 5-methoxyuracil, 2-methylthio-N6-isopentenyladenine, uracil-5-oxyacetic acid (v), wybutoxosine, pseudouracil, queosine, 2-thiocytosine, 5-methyl-2-thiouracil, 2-thiouracil, 4-thiouracil, 5-methyluracil, uracil-5-oxyacetic acid methylester, uracil-5-oxyacetic acid (v), 5-methyl-2-thiouracil, 3-(3-amino-3-N-2-carboxypropyl) uracil, (acp3)w, and 2,6-diaminopurine. Alternatively, the antisense nucleic acid can be produced biologically using an expression vector into which a nucleic acid has been sub-cloned in an antisense orientation (*i.e.*, RNA transcribed from the inserted nucleic acid will be of an antisense orientation to a target nucleic acid of interest, described further in the following subsection).

The antisense nucleic acid molecules of the invention are typically administered to a subject or generated *in situ* such that they hybridize with or bind to cellular mRNA and/or genomic DNA encoding a polypeptide corresponding to a selected marker gene of the invention to thereby inhibit expression of the marker gene, *e.g.*, by inhibiting

transcription and/or translation. The hybridization can be by conventional nucleotide complementarity to form a stable duplex, or, for example, in the case of an antisense nucleic acid molecule which binds to DNA duplexes, through specific interactions in the major groove of the double helix. Examples of a route of administration of antisense nucleic acid molecules of the invention includes direct injection at a tissue site or infusion of the antisense nucleic acid into a breast-associated body fluid. Alternatively, antisense nucleic acid molecules can be modified to target selected cells and then administered systemically. For example, for systemic administration, antisense molecules can be modified such that they specifically bind to receptors or antigens expressed on a selected cell surface, *e.g.*, by linking the antisense nucleic acid molecules to peptides or antibodies which bind to cell surface receptors or antigens. The antisense nucleic acid molecules can also be delivered to cells using the vectors described herein. To achieve sufficient intracellular concentrations of the antisense molecules, vector constructs in which the antisense nucleic acid molecule is placed under the control of a strong pol II or pol III promoter are preferred.

An antisense nucleic acid molecule of the invention can be an α-anomeric nucleic acid molecule. An α-anomeric nucleic acid molecule forms specific double-stranded hybrids with complementary RNA in which, contrary to the usual α-units, the strands run parallel to each other (Gaultier *et al.,* 1987, *Nucleic Acids Res.* 15:6625-6641). The antisense nucleic acid molecule can also comprise a 2'-o-methylribonucleotide (Inoue *et al.,* 1987, *Nucleic Acids Res.* 15:6131-6148) or a chimeric RNA-DNA analogue (Inoue *et al.,* 1987, *FEBS Lett.* 215:327-330).

The invention also encompasses ribozymes. Ribozymes are catalytic RNA molecules with ribonuclease activity which are capable of cleaving a single-stranded nucleic acid, such as an mRNA, to which they have a complementary region. Thus, ribozymes (*e.g.*, hammerhead ribozymes as described in Haselhoff and Gerlach, 1988, *Nature* 334:585-591) can be used to catalytically cleave mRNA transcripts to thereby inhibit translation of the protein encoded by the mRNA. A ribozyme having specificity for a nucleic acid molecule encoding by a marker gene of the invention can be designed based upon the nucleotide sequence of a cDNA corresponding to the marker gene. For example, a derivative of a *Tetrahymena* L-19 IVS RNA can be constructed in which the nucleotide sequence of the active site is complementary to the nucleotide sequence to be cleaved (see Cech *et al.* U.S. Patent No. 4,987,071; and Cech *et al.* U.S. Patent No. 5,116,742). Alternatively, an mRNA encoding a polypeptide of the invention can be used to select a catalytic RNA having a specific ribonuclease activity from a pool of RNA molecules (see, *e.g.*, Bartel and Szostak, 1993, *Science* 261:1411-1418).

The invention also encompasses nucleic acid molecules which form triple helical structures. For example, expression of a polypeptide of the invention can be inhibited by targeting nucleotide sequences complementary to the regulatory region of the gene encoding the polypeptide (*e.g.*, the promoter and/or enhancer) to form triple helical structures that prevent transcription of the gene in target cells. See generally Helene (1991) *Anticancer Drug Des.* 6(6):569-84; Helene (1992) *Ann. N.Y. Acad. Sci.* 660:27-36; and Maher (1992) *Bioassays* 14(12):807-15.

In various embodiments, the nucleic acid molecules of the invention can be modified at the base moiety, sugar moiety or phosphate backbone to improve, *e.g.*, the stability, hybridization, or solubility of the molecule. For example, the deoxyribose phosphate backbone of the nucleic acids can be modified to generate peptide nucleic acids (see Hyrup *et al.,* 1996, *Bioorganic & Medicinal Chemistry* 4(1): 5-23). As used herein, the terms "peptide nucleic acids" or "PNAs" refer to nucleic acid mimics, *e.g.*, DNA mimics, in which the deoxyribose phosphate backbone is replaced by a pseudopeptide backbone and only the four natural bases are retained. The neutral backbone of PNAs has been shown to allow for specific hybridization to DNA and RNA under conditions of low ionic strength. The synthesis of PNA oligomers can be performed using standard solid phase peptide synthesis protocols as described in Hyrup *et al.* (1996), *supra*; Perry-O'Keefe *et al.* (1996) *Proc. Natl. Acad. Sci. USA* 93:14670-675.

PNAs can be used in therapeutic and diagnostic applications. For example, PNAs can be used as antisense or anti-gene agents for sequence-specific modulation of gene expression by, *e.g.*, inducing transcription or translation arrest or inhibiting replication. PNAs can also be used, *e.g.*, in the analysis of single base pair mutations in a gene by, *e.g.*, PNA directed PCR clamping; as artificial restriction enzymes when used in combination with other enzymes, *e.g.*, S1 nucleases (Hyrup (1996), *supra*; or as probes or primers for DNA sequence and hybridization (Hyrup, 1996, *supra*; Perry-O'Keefe *et al.,* 1996, *Proc. Natl. Acad. Sci. USA* 93:14670-675).

In another embodiment, PNAs can be modified, *e.g.*, to enhance their stability or cellular uptake, by attaching lipophilic or other helper groups to PNA, by the formation of PNA-DNA chimeras, or by the use of liposomes or other techniques of drug delivery known in the art. For example, PNA-DNA chimeras can be generated which can combine the advantageous properties of PNA and DNA. Such chimeras allow DNA recognition enzymes, *e.g.*, RNASE H and DNA polymerases, to interact with the DNA portion while the PNA portion would provide high binding affinity and specificity. PNA-DNA chimeras can be linked using linkers of appropriate lengths selected in terms of base stacking, number of bonds between the bases, and orientation (Hyrup, 1996,

supra). The synthesis of PNA-DNA chimeras can be performed as described in Hyrup (1996), *supra*, and Finn *et al.* (1996) *Nucleic Acids Res.* 24(17):3357-63. For example, a DNA chain can be synthesized on a solid support using standard phosphoramidite coupling chemistry and modified nucleoside analogs. Compounds such as 5'-(4-methoxytrityl)amino-5'-deoxy-thymidine phosphoramidite can be used as a link between the PNA and the 5' end of DNA (Mag *et al.*, 1989, *Nucleic Acids Res.* 17:5973-88). PNA monomers are then coupled in a step-wise manner to produce a chimeric molecule with a 5' PNA segment and a 3' DNA segment (Finn *et al.*, 1996, *Nucleic Acids Res.* 24(17):3357-63). Alternatively, chimeric molecules can be synthesized with a 5' DNA segment and a 3' PNA segment (Peterser *et al.*, 1975, *Bioorganic Med. Chem. Lett.* 5:1119-11124).

In other embodiments, the oligonucleotide can include other appended groups such as peptides (*e.g.*, for targeting host cell receptors *in vivo*), or agents facilitating transport across the cell membrane (see, *e.g.*, Letsinger *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:6553-6556; Lemaitre *et al.*, 1987, *Proc. Natl. Acad. Sci. USA* 84:648-652; PCT Publication No. WO 88/09810) or the blood-brain barrier (see, *e.g.*, PCT Publication No. WO 89/10134). In addition, oligonucleotides can be modified with hybridization-triggered cleavage agents (see, *e.g.*, Krol *et al.*, 1988, *Bio/Techniques* 6:958-976) or intercalating agents (see, *e.g.*, Zon, 1988, *Pharm. Res.* 5:539-549). To this end, the oligonucleotide can be conjugated to another molecule, *e.g.*, a peptide, hybridization triggered cross-linking agent, transport agent, hybridization-triggered cleavage agent, etc.

The invention also includes molecular beacon nucleic acids having at least one region which is complementary to a nucleic acid of the invention, such that the molecular beacon is useful for quantitating the presence of the nucleic acid of the invention in a sample. A "molecular beacon" nucleic acid is a nucleic acid comprising a pair of complementary regions and having a fluorophore and a fluorescent quencher associated therewith. The fluorophore and quencher are associated with different portions of the nucleic acid in such an orientation that when the complementary regions are annealed with one another, fluorescence of the fluorophore is quenched by the quencher. When the complementary regions of the nucleic acid are not annealed with one another, fluorescence of the fluorophore is quenched to a lesser degree. Molecular beacon nucleic acids are described, for example, in U.S. Patent 5,876,930.

II. Isolated Proteins and Antibodies

One aspect of the invention pertains to isolated proteins encoded by individual marker genes of the invention, and biologically active portions thereof, as well as polypeptide fragments suitable for use as immunogens to raise antibodies directed against a polypeptide encoded by a marker gene of the invention. In one embodiment, the native polypeptide encoded by a marker gene can be isolated from cells or tissue sources by an appropriate purification scheme using standard protein purification techniques. In another embodiment, polypeptides encoded by a marker gene of the invention are produced by recombinant DNA techniques. Alternative to recombinant expression, a polypeptide encoded by a marker gene of the invention can be synthesized chemically using standard peptide synthesis techniques.

An "isolated" or "purified" protein or biologically active portion thereof is substantially free of cellular material or other contaminating proteins from the cell or tissue source from which the protein is derived, or substantially free of chemical precursors or other chemicals when chemically synthesized. The language "substantially free of cellular material" includes preparations of protein in which the protein is separated from cellular components of the cells from which it is isolated or recombinantly produced. Thus, protein that is substantially free of cellular material includes preparations of protein having less than about 30%, 20%, 10%, or 5% (by dry weight) of heterologous protein (also referred to herein as a "contaminating protein"). When the protein or biologically active portion thereof is recombinantly produced, it is also preferably substantially free of culture medium, *i.e.*, culture medium represents less than about 20%, 10%, or 5% of the volume of the protein preparation. When the protein is produced by chemical synthesis, it is preferably substantially free of chemical precursors or other chemicals, *i.e.*, it is separated from chemical precursors or other chemicals which are involved in the synthesis of the protein. Accordingly such preparations of the protein have less than about 30%, 20%, 10%, 5% (by dry weight) of chemical precursors or compounds other than the polypeptide of interest.

Biologically active portions of a polypeptide encoded by a marker gene of the invention include polypeptides comprising amino acid sequences sufficiently identical to or derived from the amino acid sequence of the protein encoded by the marker gene (*e.g.*, the amino acid sequence listed in the GenBank and IMAGE Consortium database records described herein), which include fewer amino acids than the full length protein, and exhibit at least one activity of the corresponding full-length protein. Typically, biologically active portions comprise a domain or motif with at least one activity of the corresponding protein. A biologically active portion of a protein of the invention can be a polypeptide which is, for example, 10, 25, 50, 100 or more amino acids in length.

Moreover, other biologically active portions, in which other regions of the protein are deleted, can be prepared by recombinant techniques and evaluated for one or more of the functional activities of the native form of a polypeptide of the invention.

Preferred polypeptides have the amino acid sequence listed in the NCBI Protein Database records described herein. Other useful proteins are substantially identical (*e.g.*, at least about 40%, preferably 50%, 60%, 70%, 80%, 90%, 95%, or 99%) to one of these sequences and retain the functional activity of the protein of the corresponding naturally-occurring protein yet differ in amino acid sequence due to natural allelic variation or mutagenesis.

To determine the percent identity of two amino acid sequences or of two nucleic acids, the sequences are aligned for optimal comparison purposes (*e.g.*, gaps can be introduced in the sequence of a first amino acid or nucleic acid sequence for optimal alignment with a second amino or nucleic acid sequence). The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are identical at that position. The percent identity between the two sequences is a function of the number of identical positions shared by the sequences (*i.e.*, % identity = # of identical positions/total # of positions (*e.g.*, overlapping positions) x100). In one embodiment the two sequences are the same length.

The determination of percent identity between two sequences can be accomplished using a mathematical algorithm. A preferred, non-limiting example of a mathematical algorithm utilized for the comparison of two sequences is the algorithm of Karlin and Altschul (1990) *Proc. Natl. Acad. Sci. USA* 87:2264-2268, modified as in Karlin and Altschul (1993) *Proc. Natl. Acad. Sci. USA* 90:5873-5877. Such an algorithm is incorporated into the NBLAST and XBLAST programs of Altschul, *et al.* (1990) *J. Mol. Biol.* 215:403-410. BLAST nucleotide searches can be performed with the NBLAST program, score = 100, wordlength = 12 to obtain nucleotide sequences homologous to a nucleic acid molecules of the invention. BLAST protein searches can be performed with the XBLAST program, score = 50, wordlength = 3 to obtain amino acid sequences homologous to a protein molecules of the invention. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul *et al.* (1997) *Nucleic Acids Res.* 25:3389-3402. Alternatively, PSI-Blast can be used to perform an iterated search which detects distant relationships between molecules. When utilizing BLAST, Gapped BLAST, and PSI-Blast programs, the default parameters of the respective programs (*e.g.*, XBLAST and NBLAST) can be used. See http://www.ncbi.nlm.nih.gov. Another preferred, non-limiting example of a

mathematical algorithm utilized for the comparison of sequences is the algorithm of Myers and Miller, (1988) *CABIOS* 4:11-17. Such an algorithm is incorporated into the ALIGN program (version 2.0) which is part of the GCG sequence alignment software package. When utilizing the ALIGN program for comparing amino acid sequences, a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4 can be used. Yet another useful algorithm for identifying regions of local sequence similarity and alignment is the FASTA algorithm as described in Pearson and Lipman (1988) *Proc. Natl. Acad. Sci. USA* 85:2444-2448. When using the FASTA algorithm for comparing nucleotide or amino acid sequences, a PAM120 weight residue table can, for example, be used with a *k*-tuple value of 2.

The percent identity between two sequences can be determined using techniques similar to those described above, with or without allowing gaps. In calculating percent identity, only exact matches are counted.

The invention also provides chimeric or fusion proteins corresponding to a marker gene of the invention. As used herein, a "chimeric protein" or "fusion protein" comprises all or part (preferably a biologically active part) of a polypeptide encoded by a marker gene of the invention operably linked to a heterologous polypeptide (*i.e.*, a polypeptide other than the polypeptide encoded by the marker gene). Within the fusion protein, the term "operably linked" is intended to indicate that the polypeptide of the invention and the heterologous polypeptide are fused in-frame to each other. The heterologous polypeptide can be fused to the amino-terminus or the carboxyl-terminus of the polypeptide of the invention.

One useful fusion protein is a GST fusion protein in which a polypeptide encoded by a marker gene of the invention is fused to the carboxyl terminus of GST sequences. Such fusion proteins can facilitate the purification of a recombinant polypeptide of the invention.

In another embodiment, the fusion protein contains a heterologous signal sequence at its amino terminus. For example, the native signal sequence of a polypeptide encoded by a marker gene of the invention can be removed and replaced with a signal sequence from another protein. For example, the gp67 secretory sequence of the baculovirus envelope protein can be used as a heterologous signal sequence (Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, NY, 1992). Other examples of eukaryotic heterologous signal sequences include the secretory sequences of melittin and human placental alkaline phosphatase (Stratagene; La Jolla, California). In yet another example, useful prokaryotic heterologous signal sequences include the phoA secretory signal (Sambrook *et al., supra*) and the protein A secretory signal (Pharmacia Biotech; Piscataway, New Jersey).

In yet another embodiment, the fusion protein is an immunoglobulin fusion protein in which all or part of a polypeptide encoded by a marker gene of the invention is fused to sequences derived from a member of the immunoglobulin protein family. The immunoglobulin fusion proteins of the invention can be incorporated into pharmaceutical compositions and administered to a subject to inhibit an interaction between a ligand (soluble or membrane-bound) and a protein on the surface of a cell (receptor), to thereby suppress signal transduction *in vivo*. The immunoglobulin fusion protein can be used to affect the bioavailability of a cognate ligand of a polypeptide of the invention. Inhibition of ligand/receptor interaction can be useful therapeutically, both for treating proliferative and differentiative disorders and for modulating (*e.g.* promoting or inhibiting) cell survival. Moreover, the immunoglobulin fusion proteins of the invention can be used as immunogens to produce antibodies directed against a polypeptide of the invention in a subject, to purify ligands and in screening assays to identify molecules which inhibit the interaction of receptors with ligands.

Chimeric and fusion proteins of the invention can be produced by standard recombinant DNA techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of gene fragments can be carried out using anchor primers which give rise to complementary overhangs between two consecutive gene fragments which can subsequently be annealed and re-amplified to generate a chimeric gene sequence (see, *e.g.*, Ausubel *et al., supra*). Moreover, many expression vectors are commercially available that already encode a fusion moiety (*e.g.*, a GST polypeptide). A nucleic acid encoding a polypeptide of the invention can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the polypeptide of the invention.

A signal sequence can be used to facilitate secretion and isolation of the secreted protein or other proteins of interest. Signal sequences are typically characterized by a core of hydrophobic amino acids which are generally cleaved from the mature protein during secretion in one or more cleavage events. Such signal peptides contain processing sites that allow cleavage of the signal sequence from the mature proteins as they pass through the secretory pathway. Thus, the invention pertains to the described polypeptides having a signal sequence, as well as to polypeptides from which the signal sequence has been proteolytically cleaved (*i.e.*, the cleavage products). In one embodiment, a nucleic acid sequence encoding a signal sequence can be operably linked in an expression vector to a protein of interest, such as a protein which is ordinarily not secreted or is otherwise difficult to isolate. The signal sequence directs secretion of the protein, such as from a eukaryotic host into which the expression vector is transformed,

and the signal sequence is subsequently or concurrently cleaved. The protein can then be readily purified from the extracellular medium by art recognized methods. Alternatively, the signal sequence can be linked to the protein of interest using a sequence which facilitates purification, such as with a GST domain.

The present invention also pertains to variants of the polypeptides encoded by individual marker genes of the invention. Such variants have an altered amino acid sequence which can function as either agonists (mimetics) or as antagonists. Variants can be generated by mutagenesis, *e.g.*, discrete point mutation or truncation. An agonist can retain substantially the same, or a subset, of the biological activities of the naturally occurring form of the protein. An antagonist of a protein can inhibit one or more of the activities of the naturally occurring form of the protein by, for example, competitively binding to a downstream or upstream member of a cellular signaling cascade which includes the protein of interest. Thus, specific biological effects can be elicited by treatment with a variant of limited function. Treatment of a subject with a variant having a subset of the biological activities of the naturally occurring form of the protein can have fewer side effects in a subject relative to treatment with the naturally occurring form of the protein.

Variants of a protein of the invention which function as either agonists (mimetics) or as antagonists can be identified by screening combinatorial libraries of mutants, *e.g.*, truncation mutants, of the protein of the invention for agonist or antagonist activity. In one embodiment, a variegated library of variants is generated by combinatorial mutagenesis at the nucleic acid level and is encoded by a variegated gene library. A variegated library of variants can be produced by, for example, enzymatically ligating a mixture of synthetic oligonucleotides into gene sequences such that a degenerate set of potential protein sequences is expressible as individual polypeptides, or alternatively, as a set of larger fusion proteins (*e.g.*, for phage display). There are a variety of methods which can be used to produce libraries of potential variants of the polypeptides of the invention from a degenerate oligonucleotide sequence. Methods for synthesizing degenerate oligonucleotides are known in the art (see, *e.g.*, Narang, 1983, *Tetrahedron* 39:3; Itakura *et al.*, 1984, *Annu. Rev. Biochem.* 53:323; Itakura *et al.*, 1984, *Science* 198:1056; Ike *et al.*, 1983 *Nucleic Acid Res.* 11:477).

In addition, libraries of fragments of the coding sequence of a polypeptide encoded by a marker gene of the invention can be used to generate a variegated population of polypeptides for screening and subsequent selection of variants. For example, a library of coding sequence fragments can be generated by treating a double stranded PCR fragment of the coding sequence of interest with a nuclease under conditions wherein nicking occurs only about once per molecule, denaturing the double

stranded DNA, renaturing the DNA to form double stranded DNA which can include sense/antisense pairs from different nicked products, removing single stranded portions from reformed duplexes by treatment with S1 nuclease, and ligating the resulting fragment library into an expression vector. By this method, an expression library can be derived which encodes amino terminal and internal fragments of various sizes of the protein of interest.

Several techniques are known in the art for screening gene products of combinatorial libraries made by point mutations or truncation, and for screening cDNA libraries for gene products having a selected property. The most widely used techniques, which are amenable to high through-put analysis, for screening large gene libraries typically include cloning the gene library into replicable expression vectors, transforming appropriate cells with the resulting library of vectors, and expressing the combinatorial genes under conditions in which detection of a desired activity facilitates isolation of the vector encoding the gene whose product was detected. Recursive ensemble mutagenesis (REM), a technique which enhances the frequency of functional mutants in the libraries, can be used in combination with the screening assays to identify variants of a protein of the invention (Arkin and Yourvan, 1992, *Proc. Natl. Acad. Sci. USA 89*:7811-7815; Delgrave *et al.*, 1993, *Protein Engineering* 6(3):327- 331).

An isolated polypeptide encoded by a marker gene of the invention, or a fragment thereof, can be used as an immunogen to generate antibodies using standard techniques for polyclonal and monoclonal antibody preparation. The full-length polypeptide or protein can be used or, alternatively, the invention provides antigenic peptide fragments for use as immunogens. The antigenic peptide of a protein of the invention comprises at least 8 (preferably 10, 15, 20, or 30 or more) amino acid residues of the amino acid sequence of one of the polypeptides of the invention, and encompasses an epitope of the protein such that an antibody raised against the peptide forms a specific immune complex with a protein encoded by a marker gene of the invention. Preferred epitopes encompassed by the antigenic peptide are regions that are located on the surface of the protein, *e.g.*, hydrophilic regions. Hydrophobicity sequence analysis, hydrophilicity sequence analysis, or similar analyses can be used to identify hydrophilic regions.

An immunogen typically is used to prepare antibodies by immunizing a suitable (*i.e.* immunocompetent) subject such as a rabbit, goat, mouse, or other mammal or vertebrate. An appropriate immunogenic preparation can contain, for example, recombinantly-expressed or chemically-synthesized polypeptide. The preparation can further include an adjuvant, such as Freund's complete or incomplete adjuvant, or a similar immunostimulatory agent.

Accordingly, another aspect of the invention pertains to antibodies directed against a polypeptide of the invention. The terms "antibody" and "antibody substance" as used interchangeably herein refer to immunoglobulin molecules and immunologically active portions of immunoglobulin molecules, *i.e.*, molecules that contain an antigen binding site which specifically binds an antigen, such as a polypeptide of the invention, e.g., an epitope of a polypeptide of the invention. A molecule which specifically binds to a given polypeptide of the invention is a molecule which binds the polypeptide, but does not substantially bind other molecules in a sample, *e.g.*, a biological sample, which naturally contains the polypeptide. Examples of immunologically active portions of immunoglobulin molecules include F(ab) and $F(ab')_2$ fragments which can be generated by treating the antibody with an enzyme such as pepsin. The invention provides polyclonal and monoclonal antibodies. The term "monoclonal antibody" or "monoclonal antibody composition", as used herein, refers to a population of antibody molecules that contain only one species of an antigen binding site capable of immunoreacting with a particular epitope.

Polyclonal antibodies can be prepared as described above by immunizing a suitable subject with a polypeptide of the invention as an immunogen. Preferred polyclonal antibody compositions are ones that have been selected for antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred polyclonal antibody preparations are ones that contain only antibodies directed against a polypeptide or polypeptides of the invention. Particularly preferred immunogen compositions are those that contain no other human proteins such as, for example, immunogen compositions made using a non-human host cell for recombinant expression of a polypeptide of the invention. In such a manner, the only human epitope or epitopes recognized by the resulting antibody compositions raised against this immunogen will be present as part of a polypeptide or polypeptides of the invention.

The antibody titer in the immunized subject can be monitored over time by standard techniques, such as with an enzyme linked immunosorbent assay (ELISA) using immobilized polypeptide. If desired, the antibody molecules can be harvested or isolated from the subject (*e.g.*, from the blood or serum of the subject) and further purified by well-known techniques, such as protein A chromatography to obtain the IgG fraction. Alternatively, antibodies specific for a protein or polypeptide of the invention can be selected or (*e.g.*, partially purified) or purified by, *e.g.*, affinity chromatography. For example, a recombinantly expressed and purified (or partially purified) protein of the invention is produced as described herein, and covalently or non-covalently coupled to a solid support such as, for example, a chromatography column. The column can then be used to affinity purify antibodies specific for the proteins of the invention from a

sample containing antibodies directed against a large number of different epitopes, thereby generating a substantially purified antibody composition, *i.e.,* one that is substantially free of contaminating antibodies. By a substantially purified antibody composition is meant, in this context, that the antibody sample contains at most only 30% (by dry weight) of contaminating antibodies directed against epitopes other than those of the desired protein or polypeptide of the invention, and preferably at most 20%, yet more preferably at most 10%, and most preferably at most 5% (by dry weight) of the sample is contaminating antibodies. A purified antibody composition means that at least 99% of the antibodies in the composition are directed against the desired protein or polypeptide of the invention.

At an appropriate time after immunization, *e.g.*, when the specific antibody titers are highest, antibody-producing cells can be obtained from the subject and used to prepare monoclonal antibodies by standard techniques, such as the hybridoma technique originally described by Kohler and Milstein (1975) *Nature* 256:495-497, the human B cell hybridoma technique (see Kozbor *et al.,* 1983, *Immunol. Today* 4:72), the EBV-hybridoma technique (see Cole *et al.*, pp. 77-96 In *Monoclonal Antibodies and Cancer Therapy*, Alan R. Liss, Inc., 1985) or trioma techniques. The technology for producing hybridomas is well known (see generally *Current Protocols in Immunology,* Coligan *et al.* ed., John Wiley & Sons, New York, 1994). Hybridoma cells producing a monoclonal antibody of the invention are detected by screening the hybridoma culture supernatants for antibodies that bind the polypeptide of interest, *e.g.*, using a standard ELISA assay.

Alternative to preparing monoclonal antibody-secreting hybridomas, a monoclonal antibody directed against a polypeptide of the invention can be identified and isolated by screening a recombinant combinatorial immunoglobulin library (*e.g.*, an antibody phage display library) with the polypeptide of interest. Kits for generating and screening phage display libraries are commercially available (*e.g.*, the Pharmacia *Recombinant Phage Antibody System*, Catalog No. 27-9400-01; and the Stratagene *SurfZAP Phage Display Kit,* Catalog No. 240612). Additionally, examples of methods and reagents particularly amenable for use in generating and screening antibody display library can be found in, for example, U.S. Patent No. 5,223,409; PCT Publication No. WO 92/18619; PCT Publication No. WO 91/17271; PCT Publication No. WO 92/20791; PCT Publication No. WO 92/15679; PCT Publication No. WO 93/01288; PCT Publication No. WO 92/01047; PCT Publication No. WO 92/09690; PCT Publication No. WO 90/02809; Fuchs *et al.* (1991) *Bio/Technology* 9:1370-1372; Hay *et al.* (1992) *Hum. Antibod. Hybridomas* 3:81-85; Huse *et al.* (1989) *Science* 246:1275-1281; Griffiths *et al.* (1993) *EMBO J.* 12:725-734.

Additionally, recombinant antibodies, such as chimeric and humanized monoclonal antibodies, comprising both human and non-human portions, which can be made using standard recombinant DNA techniques, are within the scope of the invention. A chimeric antibody is a molecule in which different portions are derived from different animal species, such as those having a variable region derived from a murine mAb and a human immunoglobulin constant region. (See, *e.g.,* Cabilly et al., U.S. Patent No. 4,816,567; and Boss et al., U.S. Patent No. 4,816,397, which are incorporated herein by reference in their entirety.) Humanized antibodies are antibody molecules from non-human species having one or more complementarily determining regions (CDRs) from the non-human species and a framework region from a human immunoglobulin molecule. (See, *e.g.,* Queen, U.S. Patent No. 5,585,089, which is incorporated herein by reference in its entirety.) Such chimeric and humanized monoclonal antibodies can be produced by recombinant DNA techniques known in the art, for example using methods described in PCT Publication No. WO 87/02671; European Patent Application 184,187; European Patent Application 171,496; European Patent Application 173,494; PCT Publication No. WO 86/01533; U.S. Patent No. 4,816,567; European Patent Application 125,023; Better *et al.* (1988) *Science* 240:1041-1043; Liu *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:3439-3443; Liu *et al.* (1987) *J. Immunol.* 139:3521- 3526; Sun *et al.* (1987) *Proc. Natl. Acad. Sci. USA* 84:214-218; Nishimura *et al.* (1987) *Cancer Res.* 47:999-1005; Wood *et al.* (1985) *Nature* 314:446-449; and Shaw *et al.* (1988) *J. Natl. Cancer Inst.* 80:1553-1559); Morrison (1985) *Science* 229:1202-1207; Oi *et al.* (1986) *Bio/Techniques* 4:214; U.S. Patent 5,225,539; Jones *et al.* (1986) *Nature* 321:552-525; Verhoeyan *et al.* (1988) *Science* 239:1534; and Beidler *et al.* (1988) *J. Immunol.* 141:4053-4060.

Antibodies of the invention may be used as therapeutic agents in treating cancers. In a preferred embodiment, completely human antibodies of the invention are used for therapeutic treatment of human cancer patients, particularly those having breast cancer. Such antibodies can be produced, for example, using transgenic mice which are incapable of expressing endogenous immunoglobulin heavy and light chains genes, but which can express human heavy and light chain genes. The transgenic mice are immunized in the normal fashion with a selected antigen, *e.g.*, all or a portion of a polypeptide encoded by a marker gene of the invention. Monoclonal antibodies directed against the antigen can be obtained using conventional hybridoma technology. The human immunoglobulin transgenes harbored by the transgenic mice rearrange during B cell differentiation, and subsequently undergo class switching and somatic mutation. Thus, using such a technique, it is possible to produce therapeutically useful IgG, IgA and IgE antibodies. For an overview of this technology for producing human antibodies,

see Lonberg and Huszar (1995) *Int. Rev. Immunol.* 13:65-93). For a detailed discussion of this technology for producing human antibodies and human monoclonal antibodies and protocols for producing such antibodies, see, *e.g.*, U.S. Patent 5,625,126; U.S. Patent 5,633,425; U.S. Patent 5,569,825; U.S. Patent 5,661,016; and U.S. Patent 5,545,806. In addition, companies such as Abgenix, Inc. (Freemont, CA), can be engaged to provide human antibodies directed against a selected antigen using technology similar to that described above.

Completely human antibodies which recognize a selected epitope can be generated using a technique referred to as "guided selection." In this approach a selected non-human monoclonal antibody, *e.g.*, a murine antibody, is used to guide the selection of a completely human antibody recognizing the same epitope (Jespers *et al.*, 1994, *Bio/technology* 12:899-903).

An antibody directed against a polypeptide encoded by a marker gene of the invention (*e.g.*, a monoclonal antibody) can be used to isolate the polypeptide by standard techniques, such as affinity chromatography or immunoprecipitation. Moreover, such an antibody can be used to detect the polypeptide (*e.g.*, in a cellular lysate or cell supernatant) in order to evaluate the level and pattern of expression of the marker gene. The antibodies can also be used diagnostically to monitor protein levels in tissues or body fluids (*e.g.* in an ovary-associated body fluid) as part of a clinical testing procedure, *e.g.*, to, for example, determine the efficacy of a given treatment regimen. Detection can be facilitated by coupling the antibody to a detectable substance. Examples of detectable substances include various enzymes, prosthetic groups, fluorescent materials, luminescent materials, bioluminescent materials, and radioactive materials. Examples of suitable enzymes include horseradish peroxidase, alkaline phosphatase, β-galactosidase, or acetylcholinesterase; examples of suitable prosthetic group complexes include streptavidin/biotin and avidin/biotin; examples of suitable fluorescent materials include umbelliferone, fluorescein, fluorescein isothiocyanate, rhodamine, dichlorotriazinylamine fluorescein, dansyl chloride or phycoerythrin; an example of a luminescent material includes luminol; examples of bioluminescent materials include luciferase, luciferin, and aequorin, and examples of suitable radioactive material include ^{125}I, ^{131}I, ^{35}S or ^{3}H.

Further, an antibody (or fragment thereof) can be conjugated to a therapeutic moiety such as a cytotoxin, a therapeutic agent or a radioactive metal ion. A cytotoxin or cytotoxic agent includes any agent that is detrimental to cells. Examples include taxol, cytochalasin B, gramicidin D, ethidium bromide, emetine, mitomycin, etoposide, tenoposide, vincristine, vinblastine, colchicin, doxorubicin, daunorubicin, dihydroxy anthracin dione, mitoxantrone, mithramycin, actinomycin D, 1-dehydrotestosterone,

glucocorticoids, procaine, tetracaine, lidocaine, propranolol, and puromycin and analogs or homologs thereof. Therapeutic agents include, but are not limited to, antimetabolites (*e.g.*, methotrexate, 6-mercaptopurine, 6-thioguanine, cytarabine, 5-fluorouracil decarbazine), alkylating agents (*e.g.*, mechlorethamine, thioepa chlorambucil, melphalan, carmustine (BSNU) and lomustine (CCNU), cyclothosphamide, busulfan, dibromomannitol, streptozotocin, mitomycin C, and cis-dichlorodiamine platinum (II) (DDP) cisplatin), anthracyclines (*e.g.*, daunorubicin (formerly daunomycin) and doxorubicin), antibiotics (*e.g.*, dactinomycin (formerly actinomycin), bleomycin, mithramycin, and anthramycin (AMC)), and anti-mitotic agents (*e.g.*, vincristine and vinblastine).

The conjugates of the invention can be used for modifying a given biological response, the drug moiety is not to be construed as limited to classical chemical therapeutic agents. For example, the drug moiety may be a protein or polypeptide possessing a desired biological activity. Such proteins may include, for example, a toxin such as abrin, ricin A, pseudomonas exotoxin, or diphtheria toxin; a protein such as tumor necrosis factor, .alpha.-interferon, .beta.-interferon, nerve growth factor, platelet derived growth factor, tissue plasminogen activator; or, biological response modifiers such as, for example, lymphokines, interleukin-1 ("IL-1"), interleukin-2 ("IL-2"), interleukin-6 ("IL-6"), granulocyte macrophase colony stimulating factor ("GM-CSF"), granulocyte colony stimulating factor ("G-CSF"), or other growth factors.

Techniques for conjugating such therapeutic moiety to antibodies are well known, see, *e.g.*, Arnon et al., "Monoclonal Antibodies For Immunotargeting Of Drugs In Cancer Therapy", in Monoclonal Antibodies And Cancer Therapy, Reisfeld et al. (eds.), pp. 243-56 (Alan R. Liss, Inc. 1985); Hellstrom et al., "Antibodies For Drug Delivery", in Controlled Drug Delivery (2nd Ed.), Robinson et al. (eds.), pp. 623-53 (Marcel Dekker, Inc. 1987); Thorpe, "Antibody Carriers Of Cytotoxic Agents In Cancer Therapy: A Review", in Monoclonal Antibodies '84: Biological And Clinical Applications, Pinchera et al. (eds.), pp. 475-506 (1985); "Analysis, Results, And Future Prospective Of The Therapeutic Use Of Radiolabeled Antibody In Cancer Therapy", in Monoclonal Antibodies For Cancer Detection And Therapy, Baldwin et al. (eds.), pp. 303-16 (Academic Press 1985), and Thorpe et al., "The Preparation And Cytotoxic Properties Of Antibody-Toxin Conjugates", Immunol. Rev., 62:119-58 (1982).

Alternatively, an antibody can be conjugated to a second antibody to form an antibody heteroconjugate as described by Segal in U.S. Patent No. 4,676,980.

Accordingly, in one aspect, the invention provides substantially purified antibodies or fragments thereof, and non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid

sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. In various embodiments, the substantially purified antibodies of the invention, or fragments thereof, can be human, non-human, chimeric and/or humanized antibodies.

In another aspect, the invention provides non-human antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of: the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. Such non-human antibodies can be goat, mouse, sheep, horse, chicken, rabbit, or rat antibodies. Alternatively, the non-human antibodies of the invention can be chimeric and/or humanized antibodies. In addition, the non-human antibodies of the invention can be polyclonal antibodies or monoclonal antibodies.

In still a further aspect, the invention provides monoclonal antibodies or fragments thereof, which antibodies or fragments specifically bind to a polypeptide comprising an amino acid sequence selected from the group consisting of the amino acid sequences of the present invention, an amino acid sequence encoded by the cDNA of the present invention, a fragment of at least 15 amino acid residues of an amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to an amino acid sequence of the present invention (wherein the percent

identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C. The monoclonal antibodies can be human, humanized, chimeric and/or non-human antibodies.

The substantially purified antibodies or fragments thereof may specifically bind to a signal peptide, a secreted sequence, an extracellular domain, a transmembrane or a cytoplasmic domain or cytoplasmic membrane of a polypeptide of the invention. In a particularly preferred embodiment, the substantially purified antibodies or fragments thereof, the non-human antibodies or fragments thereof, and/or the monoclonal antibodies or fragments thereof, of the invention specifically bind to a secreted sequence or an extracellular domain of the amino acid sequences of the present invention.

Any of the antibodies of the invention can be conjugated to a therapeutic moiety or to a detectable substance. Non-limiting examples of detectable substances that can be conjugated to the antibodies of the invention are an enzyme, a prosthetic group, a fluorescent material, a luminescent material, a bioluminescent material, and a radioactive material.

The invention also provides a kit containing an antibody of the invention conjugated to a detectable substance, and instructions for use. Still another aspect of the invention is a pharmaceutical composition comprising an antibody of the invention and a pharmaceutically acceptable carrier. In preferred embodiments, the pharmaceutical composition contains an antibody of the invention, a therapeutic moiety, and a pharmaceutically acceptable carrier.

Still another aspect of the invention is a method of making an antibody that specifically recognizes a polypeptide of the present invention, the method comprising immunizing a mammal with a polypeptide. The polypeptide used as an immunogen comprises an amino acid sequence selected from the group consisting of the amino acid sequence of the present invention, an amino acid sequence encoded by the cDNA of the nucleic acid molecules of the present invention, a fragment of at least 15 amino acid residues of the amino acid sequence of the present invention, an amino acid sequence which is at least 95% identical to the amino acid sequence of the present invention (wherein the percent identity is determined using the ALIGN program of the GCG software package with a PAM120 weight residue table, a gap length penalty of 12, and a gap penalty of 4) and an amino acid sequence which is encoded by a nucleic acid molecule which hybridizes to a nucleic acid molecule consisting of the nucleic acid

molecules of the present invention, or a complement thereof, under conditions of hybridization of 6X SSC at 45°C and washing in 0.2 X SSC, 0.1% SDS at 65°C.

After immunization, a sample is collected from the mammal that contains an antibody that specifically recognizes the polypeptide. Preferably, the polypeptide is recombinantly produced using a non-human host cell. Optionally, the antibodies can be further purified from the sample using techniques well known to those of skill in the art. The method can further comprise producing a monoclonal antibody- producing cell from the cells of the mammal. Optionally, antibodies are collected from the antibody-producing cell.

III. Recombinant Expression Vectors and Host Cells

Another aspect of the invention pertains to vectors, preferably expression vectors, containing a nucleic acid encoding a polypeptide encoded by a marker gene of the invention (or a portion of such a polypeptide). As used herein, the term "vector" refers to a nucleic acid molecule capable of transporting another nucleic acid to which it has been linked. One type of vector is a "plasmid", which refers to a circular double stranded DNA loop into which additional DNA segments can be ligated. Another type of vector is a viral vector, wherein additional DNA segments can be ligated into the viral genome. Certain vectors are capable of autonomous replication in a host cell into which they are introduced (*e.g.*, bacterial vectors having a bacterial origin of replication and episomal mammalian vectors). Other vectors (*e.g.*, non-episomal mammalian vectors) are integrated into the genome of a host cell upon introduction into the host cell, and thereby are replicated along with the host genome. Moreover, certain vectors, namely expression vectors, are capable of directing the expression of genes to which they are operably linked. In general, expression vectors of utility in recombinant DNA techniques are often in the form of plasmids (vectors). However, the invention is intended to include such other forms of expression vectors, such as viral vectors (*e.g.*, replication defective retroviruses, adenoviruses and adeno-associated viruses), which serve equivalent functions.

The recombinant expression vectors of the invention comprise a nucleic acid of the invention in a form suitable for expression of the nucleic acid in a host cell. This means that the recombinant expression vectors include one or more regulatory sequences, selected on the basis of the host cells to be used for expression, which is operably linked to the nucleic acid sequence to be expressed. Within a recombinant expression vector, "operably linked" is intended to mean that the nucleotide sequence of interest is linked to the regulatory sequence(s) in a manner which allows for expression of the nucleotide sequence (*e.g.*, in an *in vitro* transcription/translation system or in a

host cell when the vector is introduced into the host cell). The term "regulatory sequence" is intended to include promoters, enhancers and other expression control elements (*e.g.*, polyadenylation signals). Such regulatory sequences are described, for example, in Goeddel, *Methods in Enzymology: Gene Expression Technology* vol.185, Academic Press, San Diego, CA (1991). Regulatory sequences include those which direct constitutive expression of a nucleotide sequence in many types of host cell and those which direct expression of the nucleotide sequence only in certain host cells (*e.g.*, tissue-specific regulatory sequences). It will be appreciated by those skilled in the art that the design of the expression vector can depend on such factors as the choice of the host cell to be transformed, the level of expression of protein desired, and the like. The expression vectors of the invention can be introduced into host cells to thereby produce proteins or peptides, including fusion proteins or peptides, encoded by nucleic acids as described herein.

The recombinant expression vectors of the invention can be designed for expression of a polypeptide encoded by a marker gene of the invention in prokaryotic (*e.g.*, *E. coli*) or eukaryotic cells (*e.g.*, insect cells {using baculovirus expression vectors}, yeast cells or mammalian cells). Suitable host cells are discussed further in Goeddel, *supra*. Alternatively, the recombinant expression vector can be transcribed and translated *in vitro*, for example using T7 promoter regulatory sequences and T7 polymerase.

Expression of proteins in prokaryotes is most often carried out in *E. coli* with vectors containing constitutive or inducible promoters directing the expression of either fusion or non-fusion proteins. Fusion vectors add a number of amino acids to a protein encoded therein, usually to the amino terminus of the recombinant protein. Such fusion vectors typically serve three purposes: 1) to increase expression of recombinant protein; 2) to increase the solubility of the recombinant protein; and 3) to aid in the purification of the recombinant protein by acting as a ligand in affinity purification. Often, in fusion expression vectors, a proteolytic cleavage site is introduced at the junction of the fusion moiety and the recombinant protein to enable separation of the recombinant protein from the fusion moiety subsequent to purification of the fusion protein. Such enzymes, and their cognate recognition sequences, include Factor Xa, thrombin and enterokinase. Typical fusion expression vectors include pGEX (Pharmacia Biotech Inc; Smith and Johnson, 1988, *Gene* 67:31-40), pMAL (New England Biolabs, Beverly, MA) and pRIT5 (Pharmacia, Piscataway, NJ) which fuse glutathione S-transferase (GST), maltose E binding protein, or protein A, respectively, to the target recombinant protein.

Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amann *et al.*, 1988, *Gene* 69:301-315) and pET 11d (Studier *et al.*, p. 60-89, In *Gene Expression Technology: Methods in Enzymology* vol.185, Academic Press, San Diego, CA, 1991). Target gene expression from the pTrc vector relies on host RNA polymerase transcription from a hybrid trp-lac fusion promoter. Target gene expression from the pET 11d vector relies on transcription from a T7 gn10-lac fusion promoter mediated by a co-expressed viral RNA polymerase (T7 gn1). This viral polymerase is supplied by host strains BL21(DE3) or HMS174(DE3) from a resident prophage harboring a T7 gn1 gene under the transcriptional control of the lacUV 5 promoter.

One strategy to maximize recombinant protein expression in *E. coli* is to express the protein in a host bacteria with an impaired capacity to proteolytically cleave the recombinant protein (Gottesman, p. 119-128, In *Gene Expression Technology: Methods in Enzymology* vol. 185, Academic Press, San Diego, CA, 1990. Another strategy is to alter the nucleic acid sequence of the nucleic acid to be inserted into an expression vector so that the individual codons for each amino acid are those preferentially utilized in *E. coli* (Wada *et al.,* 1992, *Nucleic Acids Res.* 20:2111-2118). Such alteration of nucleic acid sequences of the invention can be carried out by standard DNA synthesis techniques.

In another embodiment, the expression vector is a yeast expression vector. Examples of vectors for expression in yeast *S. cerevisiae* include pYepSec1 (Baldari *et al.,* 1987, *EMBO J.* 6:229-234), pMFa (Kurjan and Herskowitz, 1982, *Cell* 30:933-943), pJRY88 (Schultz *et al.,* 1987, *Gene* 54:113-123), pYES2 (Invitrogen Corporation, San Diego, CA), and pPicZ (Invitrogen Corp, San Diego, CA).

Alternatively, the expression vector is a baculovirus expression vector. Baculovirus vectors available for expression of proteins in cultured insect cells (*e.g.*, Sf 9 cells) include the pAc series (Smith *et al.*, 1983, *Mol. Cell Biol.* 3:2156-2165) and the pVL series (Lucklow and Summers, 1989, *Virology* 170:31-39).

In yet another embodiment, a nucleic acid of the invention is expressed in mammalian cells using a mammalian expression vector. Examples of mammalian expression vectors include pCDM8 (Seed, 1987, *Nature* 329:840) and pMT2NOPC (Kaufman *et al.,* 1987, *EMBO J.* 6:187-195). When used in mammalian cells, the expression vector's control functions are often provided by viral regulatory elements. For example, commonly used promoters are derived from polyoma, Adenovirus 2, cytomegalovirus and Simian Virus 40. For other suitable expression systems for both prokaryotic and eukaryotic cells see chapters 16 and 17 of Sambrook *et al.*, *supra.*

In another embodiment, the recombinant mammalian expression vector is capable of directing expression of the nucleic acid preferentially in a particular cell type (*e.g.*, tissue-specific regulatory elements are used to express the nucleic acid). Tissue-specific regulatory elements are known in the art. Non-limiting examples of suitable tissue-specific promoters include the albumin promoter (liver-specific; Pinkert *et al.*, 1987, *Genes Dev.* 1:268-277), lymphoid-specific promoters (Calame and Eaton, 1988, *Adv. Immunol.* 43:235-275), in particular promoters of T cell receptors (Winoto and Baltimore, 1989, *EMBO J.* 8:729-733) and immunoglobulins (Banerji *et al.*, 1983, *Cell* 33:729-740; Queen and Baltimore, 1983, *Cell* 33:741-748), neuron-specific promoters (*e.g.*, the neurofilament promoter; Byrne and Ruddle, 1989, *Proc. Natl. Acad. Sci. USA* 86:5473-5477), pancreas-specific promoters (Edlund *et al.*, 1985, *Science* 230:912-916), and mammary gland-specific promoters (*e.g.*, milk whey promoter; U.S. Patent No. 4,873,316 and European Application Publication No. 264,166). Developmentally-regulated promoters are also encompassed, for example the murine hox promoters (Kessel and Gruss, 1990, *Science* 249:374-379) and the α-fetoprotein promoter (Camper and Tilghman, 1989, *Genes Dev.* 3:537-546).

The invention further provides a recombinant expression vector comprising a DNA molecule of the invention cloned into the expression vector in an antisense orientation. That is, the DNA molecule is operably linked to a regulatory sequence in a manner which allows for expression (by transcription of the DNA molecule) of an RNA molecule which is antisense to the mRNA encoding a polypeptide of the invention. Regulatory sequences operably linked to a nucleic acid cloned in the antisense orientation can be chosen which direct the continuous expression of the antisense RNA molecule in a variety of cell types, for instance viral promoters and/or enhancers, or regulatory sequences can be chosen which direct constitutive, tissue-specific or cell type specific expression of antisense RNA. The antisense expression vector can be in the form of a recombinant plasmid, phagemid, or attenuated virus in which antisense nucleic acids are produced under the control of a high efficiency regulatory region, the activity of which can be determined by the cell type into which the vector is introduced. For a discussion of the regulation of gene expression using antisense genes see Weintraub *et al.*, 1986, *Trends in Genetics*, Vol. 1(1).

Another aspect of the invention pertains to host cells into which a recombinant expression vector of the invention has been introduced. The terms "host cell" and "recombinant host cell" are used interchangeably herein. It is understood that such terms refer not only to the particular subject cell but to the progeny or potential progeny of such a cell. Because certain modifications may occur in succeeding generations due to either mutation or environmental influences, such progeny may not, in fact, be

identical to the parent cell, but are still included within the scope of the term as used herein.

A host cell can be any prokaryotic (*e.g.*, *E. coli*) or eukaryotic cell (*e.g.*, insect cells, yeast or mammalian cells).

Vector DNA can be introduced into prokaryotic or eukaryotic cells via conventional transformation or transfection techniques. As used herein, the terms "transformation" and "transfection" are intended to refer to a variety of art-recognized techniques for introducing foreign nucleic acid into a host cell, including calcium phosphate or calcium chloride co-precipitation, DEAE-dextran-mediated transfection, lipofection, or electroporation. Suitable methods for transforming or transfecting host cells can be found in Sambrook, *et al.* (*supra*), and other laboratory manuals.

For stable transfection of mammalian cells, it is known that, depending upon the expression vector and transfection technique used, only a small fraction of cells may integrate the foreign DNA into their genome. In order to identify and select these integrants, a gene that encodes a "selectable marker" (SM) gene (*e.g.*, for resistance to antibiotics) is generally introduced into the host cells along with the gene of interest. Preferred SM genes include those which confer resistance to drugs, such as G418, hygromycin and methotrexate. Cells stably transfected with the introduced nucleic acid can be identified by drug selection (*e.g.*, cells that have incorporated the SM gene will survive, while the other cells die).

A host cell of the invention, such as a prokaryotic or eukaryotic host cell in culture, can be used to produce a polypeptide encoded by a marker gene of the invention. Accordingly, the invention further provides methods for producing a polypeptide encoded by a marker gene of the invention using the host cells of the invention. In one embodiment, the method comprises culturing the host cell of invention (into which a recombinant expression vector encoding a polypeptide of the invention has been introduced) in a suitable medium such that the polypeptide encoded by the marker gene is produced. In another embodiment, the method further comprises isolating the polypeptide from the medium or the host cell.

The host cells of the invention can also be used to produce nonhuman transgenic animals. For example, in one embodiment, a host cell of the invention is a fertilized oocyte or an embryonic stem cell into which a sequences encoding a polypeptide of a marker gene of the invention have been introduced. Such host cells can then be used to create non-human transgenic animals in which exogenous sequences encoding a marker gene of the invention have been introduced into their genome or homologous recombinant animals in which endogenous gene(s) encoding a polypeptide corresponding to a marker gene of the invention have been altered. Such animals are

useful for studying the function and/or activity of the polypeptide corresponding to the marker gene and for identifying and/or evaluating modulators of polypeptide activity. As used herein, a "transgenic animal" is a non-human animal, preferably a mammal, more preferably a rodent such as a rat or mouse, in which one or more of the cells of the animal includes a transgene. Other examples of transgenic animals include non-human primates, sheep, dogs, cows, goats, chickens, amphibians, etc. A transgene is exogenous DNA which is integrated into the genome of a cell from which a transgenic animal develops and which remains in the genome of the mature animal, thereby directing the expression of an encoded gene product in one or more cell types or tissues of the transgenic animal. As used herein, an "homologous recombinant animal" is a non-human animal, preferably a mammal, more preferably a mouse, in which an endogenous gene has been altered by homologous recombination between the endogenous gene and an exogenous DNA molecule introduced into a cell of the animal, *e.g.*, an embryonic cell of the animal, prior to development of the animal.

A transgenic animal of the invention can be created by introducing a nucleic acid encoding a polypeptide encoded by a marker gene of the invention into the male pronuclei of a fertilized oocyte, *e.g.*, by microinjection, retroviral infection, and allowing the oocyte to develop in a pseudopregnant female foster animal. Intronic sequences and polyadenylation signals can also be included in the transgene to increase the efficiency of expression of the transgene. A tissue-specific regulatory sequence(s) can be operably linked to the transgene to direct expression of the polypeptide of the invention to particular cells. Methods for generating transgenic animals via embryo manipulation and microinjection, particularly animals such as mice, have become conventional in the art and are described, for example, in U.S. Patent Nos. 4,736,866 and 4,870,009, U.S. Patent No. 4,873,191 and in Hogan, *Manipulating the Mouse Embryo*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, N.Y., 1986. Similar methods are used for production of other transgenic animals. A transgenic founder animal can be identified based upon the presence of the transgene in its genome and/or expression of mRNA encoding the transgene in tissues or cells of the animals. A transgenic founder animal can then be used to breed additional animals carrying the transgene. Moreover, transgenic animals carrying the transgene can further be bred to other transgenic animals carrying other transgenes.

To create an homologous recombinant animal, a vector is prepared which contains at least a portion of a marker gene of the invention into which a deletion, addition or substitution has been introduced to thereby alter, *e.g.*, functionally disrupt, the gene. In a preferred embodiment, the vector is designed such that, upon homologous recombination, the endogenous gene is functionally disrupted (*i.e.*, no longer encodes a

functional protein; also referred to as a "knock out" vector). Alternatively, the vector can be designed such that, upon homologous recombination, the endogenous gene is mutated or otherwise altered but still encodes functional protein (*e.g.*, the upstream regulatory region can be altered to thereby alter the expression of the endogenous protein). In the homologous recombination vector, the altered portion of the gene is flanked at its 5' and 3' ends by additional nucleic acid of the gene to allow for homologous recombination to occur between the exogenous gene carried by the vector and an endogenous gene in an embryonic stem cell. The additional flanking nucleic acid sequences are of sufficient length for successful homologous recombination with the endogenous gene. Typically, several kilobases of flanking DNA (both at the 5' and 3' ends) are included in the vector (see, *e.g.*, Thomas and Capecchi, 1987, *Cell* 51:503 for a description of homologous recombination vectors). The vector is introduced into an embryonic stem cell line (*e.g.*, by electroporation) and cells in which the introduced gene has homologously recombined with the endogenous gene are selected (see, *e.g.*, Li *et al.*, 1992, *Cell* 69:915). The selected cells are then injected into a blastocyst of an animal (*e.g.*, a mouse) to form aggregation chimeras (see, *e.g.*, Bradley, *Teratocarcinomas and Embryonic Stem Cells: A Practical Approach*, Robertson, Ed., IRL, Oxford, 1987, pp. 113-152). A chimeric embryo can then be implanted into a suitable pseudopregnant female foster animal and the embryo brought to term. Progeny harboring the homologously recombined DNA in their germ cells can be used to breed animals in which all cells of the animal contain the homologously recombined DNA by germline transmission of the transgene. Methods for constructing homologous recombination vectors and homologous recombinant animals are described further in Bradley (1991) *Current Opinion in Bio/Technology* 2:823-829 and in PCT Publication NOS. WO 90/11354, WO 91/01140, WO 92/0968, and WO 93/04169.

In another embodiment, transgenic non-human animals can be produced which contain selected systems which allow for regulated expression of the transgene. One example of such a system is the *cre/loxP* recombinase system of bacteriophage P1. For a description of the *cre/loxP* recombinase system, see, *e.g.*, Lakso *et al.* (1992) *Proc. Natl. Acad. Sci. USA* 89:6232-6236. Another example of a recombinase system is the FLP recombinase system of *Saccharomyces cerevisiae* (O'Gorman *et al.*, 1991, *Science* 251:1351-1355). If a *cre/loxP* recombinase system is used to regulate expression of the transgene, animals containing transgenes encoding both the *Cre* recombinase and a selected protein are required. Such animals can be provided through the construction of "double" transgenic animals, *e.g.*, by mating two transgenic animals, one containing a transgene encoding a selected protein and the other containing a transgene encoding a recombinase.

Clones of the non-human transgenic animals described herein can also be produced according to the methods described in Wilmut *et al.* (1997) *Nature* 385:810-813 and PCT Publication NOS. WO 97/07668 and WO 97/07669.

IV. Pharmaceutical Compositions

The nucleic acid molecules, polypeptides, and antibodies (also referred to herein as "active compounds") encoded by or corresponding to a marker gene of the invention can be incorporated into pharmaceutical compositions suitable for administration. Such compositions typically comprise the nucleic acid molecule, protein, or antibody and a pharmaceutically acceptable carrier. As used herein the language "pharmaceutically acceptable carrier" is intended to include any and all solvents, dispersion media, coatings, antibacterial and antifungal agents, isotonic and absorption delaying agents, and the like, compatible with pharmaceutical administration. The use of such media and agents for pharmaceutically active substances is well known in the art. Except insofar as any conventional media or agent is incompatible with the active compound, use thereof in the compositions is contemplated. Supplementary active compounds can also be incorporated into the compositions.

The invention includes methods for preparing pharmaceutical compositions for modulating the expression or activity of a polypeptide or nucleic acid encoded by a marker gene of the invention. Such methods comprise formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid encoded by a marker gene of the invention. Such compositions can further include additional active agents. Thus, the invention further includes methods for preparing a pharmaceutical composition by formulating a pharmaceutically acceptable carrier with an agent which modulates expression or activity of a polypeptide or nucleic acid encoded by a marker gene of the invention and one or more additional active compounds.

The invention also provides methods (also referred to herein as "screening assays") for identifying modulators, *i.e.,* candidate or test compounds or agents (*e.g.,* peptides, peptidomimetics, peptoids, small molecules or other drugs) which (a) bind to the marker gene or its gene products, or (b) have a modulatory (*e.g.,* stimulatory or inhibitory) effect on the activity of the marker gene or, more specifically, (c) have a modulatory effect on the interactions of a protein encoded by the marker gene (hereinafter "marker protein") with one or more of its natural substrates (*e.g.,* peptide, protein, hormone, co-factor, or nucleic acid), or (d) have a modulatory effect on the expression of the marker gene. Such assays typically comprise a reaction between the marker gene or the marker protein and one or more assay components. The other

components may be either the test compound itself, or a combination of test compound and a natural binding partner of the marker protein.

The test compounds of the present invention may be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. Test compounds may also be obtained by any of the numerous approaches in combinatorial library methods known in the art, including: biological libraries; peptoid libraries (libraries of molecules having the functionalities of peptides, but with a novel, non-peptide backbone which are resistant to enzymatic degradation but which nevertheless remain bioactive; see, *e.g.*, Zuckermann *et al.*, 1994, *J. Med. Chem.* 37:2678-85); spatially addressable parallel solid phase or solution phase libraries; synthetic library methods requiring deconvolution; the 'one-bead one-compound' library method; and synthetic library methods using affinity chromatography selection. The biological library and peptoid library approaches are limited to peptide libraries, while the other four approaches are applicable to peptide, non-peptide oligomer or small molecule libraries of compounds (Lam, 1997, *Anticancer Drug Des.* 12:145).

Examples of methods for the synthesis of molecular libraries can be found in the art, for example in: DeWitt *et al.* (1993) *Proc. Natl. Acad. Sci. U.S.A.* 90:6909; Erb *et al.* (1994) *Proc. Natl. Acad. Sci. USA* 91:11422; Zuckermann *et al.* (1994). *J. Med. Chem.* 37:2678; Cho *et al.* (1993) *Science* 261:1303; Carrell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2059; Carell *et al.* (1994) *Angew. Chem. Int. Ed. Engl.* 33:2061; and in Gallop *et al.* (1994) *J. Med. Chem.* 37:1233.

Libraries of compounds may be presented in solution (*e.g.*, Houghten, 1992, *Biotechniques* 13:412-421), or on beads (Lam, 1991, *Nature* 354:82-84), chips (Fodor, 1993, *Nature* 364:555-556), bacteria and/or spores, (Ladner, USP 5,223,409), plasmids (Cull *et al*, 1992, *Proc Natl Acad Sci USA* 89:1865-1869) or on phage (Scott and Smith, 1990, *Science* 249:386-390; Devlin, 1990, *Science* 249:404-406; Cwirla *et al*, 1990, *Proc. Natl. Acad. Sci.* 87:6378-6382; Felici, 1991, *J. Mol. Biol.* 222:301-310; Ladner, *supra.*).

In one embodiment, the invention provides assays for screening candidate or test compounds which are substrates of the marker protein or biologically active portion thereof. In another embodiment, the invention provides assays for screening candidate or test compounds which bind to a marker protein or biologically active portion thereof. Determining the ability of the test compound to directly bind to a marker protein can be accomplished, for example, by coupling the compound with a radioisotope or enzymatic label such that binding of the compound to the marker protein can be determined by detecting the marker protein compound in a labeled complex. For example, compounds (*e.g.*, substrates of the marker protein) can be labeled with ^{125}I, ^{35}S, ^{14}C, or ^{3}H, either

directly or indirectly, and the radioisotope detected by direct counting of radioemission or by scintillation counting. Alternatively, assay components can be enzymatically labeled with, for example, horseradish peroxidase, alkaline phosphatase, or luciferase, and the enzymatic label detected by determination of conversion of an appropriate substrate to product.

In another embodiment, the invention provides assays for screening candidate or test compounds which modulate the activity of a marker protein or a biologically active portion thereof. In all likelihood, the marker protein can, *in vivo*, interact with one or more molecules, such as but not limited to, peptides, proteins, hormones, cofactors and nucleic acids. For the purposes of this discussion, such cellular and extracellular molecules are referred to herein as "binding partners" or marker protein "substrate". One necessary embodiment of the invention in order to facilitate such screening is the use of the marker protein to identify its natural *in vivo* binding partners. There are many ways to accomplish this which are known to one skilled in the art. One example is the use of the marker protein as "bait protein" in a two-hybrid assay or three-hybrid assay (see, *e.g.,* U.S. Patent No. 5,283,317; Zervos *et al*, 1993, *Cell* 72:223-232; Madura *et al*, 1993, *J. Biol. Chem.* 268:12046-12054; Bartel *et al* ,1993, *Biotechniques* 14:920-924; Iwabuchi *et al*, 1993 *Oncogene* 8:1693-1696; Brent WO94/10300) in order to identify other proteins which bind to or interact with the marker protein (binding partners) and, therefore, are possibly involved in the natural function of the marker protein. Such marker protein binding partners are also likely to be involved in the propagation of signals by the marker protein or downstream elements of a marker gene-mediated signaling pathway. Alternatively, such marker protein binding partners may also be found to be inhibitors of the marker protein .

The two-hybrid system is based on the modular nature of most transcription factors, which consist of separable DNA-binding and activation domains. Briefly, the assay utilizes two different DNA constructs. In one construct, the gene that encodes a marker protein fused to a gene encoding the DNA binding domain of a known transcription factor (*e.g.,* GAL-4). In the other construct, a DNA sequence, from a library of DNA sequences, that encodes an unidentified protein ("prey" or "sample") is fused to a gene that codes for the activation domain of the known transcription factor. If the "bait" and the "prey" proteins are able to interact, *in vivo,* forming a marker gene-dependent complex, the DNA-binding and activation domains of the transcription factor are brought into close proximity. This proximity allows transcription of a reporter gene (*e.g.,* LacZ) which is operably linked to a transcriptional regulatory site responsive to the transcription factor. Expression of the reporter gene can be readily detected and cell

colones containing the functional transcription factor can be isolated and used to obtain the cloned gene which encodes the protein which interacts with the marker protein.

In a further embodiment, assays may be devised through the use of the invention for the purpose of identifying compounds which modulate (*e.g.*, affect either positively or negatively) interactions between a marker protein and its substrates and/or binding partners. Such compounds can include, but are not limited to, molecules such as antibodies, peptides, hormones, oligonucleotides, nucleic acids, and analogs thereof. Such compounds may also be obtained from any available source, including systematic libraries of natural and/or synthetic compounds. The preferred assay components for use in this embodiment is a marker protein identified herein (see Table 1), the known binding partner and/or substrate of same, and the test compound. Test compounds can be supplied from any source.

The basic principle of the assay systems used to identify compounds that interfere with the interaction between a marker protein and its binding partner involves preparing a reaction mixture containing the protein and its binding partner under conditions and for a time sufficient to allow the two products to interact and bind, thus forming a complex. In order to test an agent for inhibitory activity, the reaction mixture is prepared in the presence and absence of the test compound. The test compound can be initially included in the reaction mixture, or can be added at a time subsequent to the addition of the protein and its binding partner. Control reaction mixtures are incubated without the test compound or with a placebo. The formation of any complexes between the protein and its binding partner is then detected. The formation of a complex in the control reaction, but less or no such formation in the reaction mixture containing the test compound, indicates that the compound interferes with the interaction of the marker protein and its binding partner. Conversely, the formation of more complex in the presence of compound than in the control reaction indicates that the compound may enhance interaction of the marker protein and its binding partner.

The assay for compounds that interfere with the interaction of a marker protein with its binding partner may be conducted in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring either the marker protein or its binding partner onto a solid phase and detecting complexes anchored to the solid phase at the end of the reaction. In homogeneous assays, the entire reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the marker protein and the binding partners (*e.g.*, by competition) can be identified by conducting the reaction in the presence of the test substance, *i.e.*, by adding the test substance to the reaction mixture prior to or

simultaneously with the marker protein and its interactive binding partner. Alternatively, test compounds that disrupt preformed complexes, *e.g.,* compounds with higher binding constants that displace one of the components from the complex, can be tested by adding the test compound to the reaction mixture after complexes have been formed. The various formats are briefly described below.

In a heterogeneous assay system, either a marker protein or its binding partner is anchored onto a solid surface or matrix, while the other corresponding non-anchored component may be labeled, either directly or indirectly. In practice, microtitre plates are often utilized for this approach. The anchored species can be immobilized by a number of methods, either non-covalent or covalent, that are typically well known to one who practices the art. Non-covalent attachment can often be accomplished simply by coating the solid surface with a solution of the marker protein or its binding partner and drying. Alternatively, an immobilized antibody specific for the assay component to be anchored can be used for this purpose. Such surfaces can often be prepared in advance and stored.

In related embodiments, a fusion protein can be provided which adds a domain that allows one or both of the assay components to be anchored to a matrix. For example, glutathione-S-transferase/marker protein fusion proteins or glutathione-S-transferase/binding partner can be adsorbed onto glutathione sepharose beads (Sigma Chemical, St. Louis, MO) or glutathione derivatized microtiter plates, which are then combined with the test compound or the test compound and either the non-adsorbed marker protein or its binding partner, and the mixture incubated under conditions conducive to complex formation (*e.g.,* physiological conditions). Following incubation, the beads or microtiter plate wells are washed to remove any unbound assay components, the immobilized complex assessed either directly or indirectly, for example, as described above. Alternatively, the complexes can be dissociated from the matrix, and the level of marker protein binding or activity determined using standard techniques.

Other techniques for immobilizing proteins on matrices can also be used in the screening assays of the invention. For example, either a marker protein or its binding partner can be immobilized utilizing conjugation of biotin and streptavidin. Biotinylated marker protein or target molecules can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.,* biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the protein-immobilized surfaces can be prepared in advance and stored.

In order to conduct the assay, the corresponding partner of the immobilized assay component is exposed to the coated surface with or without the test compound. After the reaction is complete, unreacted assay components are removed (*e.g.*, by washing) and any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the non-immobilized component is pre-labeled, the detection of label immobilized on the surface indicates that complexes were formed. Where the non-immobilized component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; *e.g.*, using a labeled antibody specific for the initially non-immobilized species (the antibody, in turn, can be directly labeled or indirectly labeled with, *e.g.*, a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which modulate (inhibit or enhance) complex formation or which disrupt preformed complexes can be detected.

In an alternate embodiment of the invention, a homogeneous assay may be used. This is typically a reaction, analogous to those mentioned above, which is conducted in a liquid phase in the presence or absence of the test compound. The formed complexes are then separated from unreacted components, and the amount of complex formed is determined. As mentioned for heterogeneous assay systems, the order of addition of reactants to the liquid phase can yield information about which test compounds modulate (inhibit or enhance) complex formation and which disrupt preformed complexes.

In such a homogeneous assay, the reaction products may be separated from unreacted assay components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, complexes of molecules may be separated from uncomplexed molecules through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., *Trends Biochem Sci* 1993 Aug;18(8):284-7). Standard chromatographic techniques may also be utilized to separate complexed molecules from uncomplexed ones. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complex may be separated from the relatively smaller uncomplexed components. Similarly, the relatively different charge properties of the complex as compared to the uncomplexed molecules may be exploited to differentially separate the complex from the remaining individual reactants, for example through the use of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to

one skilled in the art (see, *e.g.*, Heegaard, 1998, *J Mol. Recognit.* 11:141-148; Hage and Tweed, 1997, *J. Chromatogr. B. Biomed. Sci. Appl.*, 699:499-525). Gel electrophoresis may also be employed to separate complexed molecules from unbound species (see, *e.g.*, Ausubel *et al* (eds.), In: Current Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, nondenaturing gels in the absence of reducing agent are typically preferred, but conditions appropriate to the particular interactants will be well known to one skilled in the art. Immunoprecipitation is another common technique utilized for the isolation of a protein-protein complex from solution (see, *e.g.*, Ausubel *et al* (eds.), In: Current Protocols in Molecular Biology, J. Wiley & Sons, New York. 1999). In this technique, all proteins binding to an antibody specific to one of the binding molecules are precipitated from solution by conjugating the antibody to a polymer bead that may be readily collected by centrifugation. The bound assay components are released from the beads (through a specific proteolysis event or other technique well known in the art which will not disturb the protein-protein interaction in the complex), and a second immunoprecipitation step is performed, this time utilizing antibodies specific for the correspondingly different interacting assay component. In this manner, only formed complexes should remain attached to the beads. Variations in complex formation in both the presence and the absence of a test compound can be compared, thus offering information about the ability of the compound to modulate interactions between the marker protein and its binding partner.

Also within the scope of the present invention are methods for direct detection of interactions between a marker protein and its natural binding partner and/or a test compound in a homogeneous or heterogeneous assay system without further sample manipulation. For example, the technique of fluorescence energy transfer may be utilized (see, *e.g.*, Lakowicz *et al*, U.S. Patent No. 5,631,169; Stavrianopoulos *et al*, U.S. Patent No. 4,868,103). Generally, this technique involves the addition of a fluorophore label on a first 'donor' molecule (*e.g.*, test compound) such that its emitted fluorescent energy will be absorbed by a fluorescent label on a second, 'acceptor' molecule (*e.g.*, test compound), which in turn is able to fluoresce due to the absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent

emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter). A test substance which either enhances or hinders participation of one of the species in the preformed complex will result in the generation of a signal variant to that of background. In this way, test substances that modulate interactions between a marker protein and its binding partner can be identified in controlled assays.

In another embodiment, modulators of marker gene expression are identified in a method wherein a cell is contacted with a candidate compound and the expression of mRNA or protein encoded by a marker gene is determined. The level of expression of mRNA or protein in the presence of the candidate compound is compared to the level of expression of mRNA or protein in the absence of the candidate compound. The candidate compound can then be identified as a modulator of marker gene expression based on this comparison. For example, when expression of marker gene mRNA or protein is greater (statistically significantly greater) in the presence of the candidate compound than in its absence, the candidate compound is identified as a stimulator of marker gene expression. Conversely, when expression of marker gene mRNA or protein is less (statistically significantly less) in the presence of the candidate compound than in its absence, the candidate compound is identified as an inhibitor of marker gene expression. The level of marker gene expression in the cells can be determined by methods described herein for detecting marker gene mRNA or protein.

In another aspect, the invention pertains to a combination of two or more of the assays described herein. For example, a modulating agent can be identified using a cell-based or a cell free assay, and the ability of the agent to modulate the activity of a marker protein can be further confirmed *in vivo*, *e.g.*, in a whole animal model for cellular transformation and/or tumorigenesis.

This invention further pertains to novel agents identified by the above-described screening assays. Accordingly, it is within the scope of this invention to further use an agent identified as described herein in an appropriate animal model. For example, an agent identified as described herein (*e.g.*, a marker gene or marker protein modulating agent, an antisense marker gene nucleic acid molecule, an marker protein specific antibody, or an marker protein binding partner) can be used in an animal model to determine the efficacy, toxicity, or side effects of treatment with such an agent. Alternatively, an agent identified as described herein can be used in an animal model to determine the mechanism of action of such an agent. Furthermore, this invention pertains to uses of novel agents identified by the above-described screening assays for treatments as described herein.

It is understood that appropriate doses of small molecule agents and protein or polypeptide agents depends upon a number of factors within the knowledge of the ordinarily skilled physician, veterinarian, or researcher. The dose(s) of these agents will vary, for example, depending upon the identity, size, and condition of the subject or sample being treated, further depending upon the route by which the composition is to be administered, if applicable, and the effect which the practitioner desires the agent to have upon the nucleic acid or polypeptide of the invention. Exemplary doses of a small molecule include milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 500 milligrams per kilogram, about 100 micrograms per kilogram to about 5 milligrams per kilogram, or about 1 microgram per kilogram to about 50 micrograms per kilogram). Exemplary doses of a protein or polypeptide include gram, milligram or microgram amounts per kilogram of subject or sample weight (*e.g.* about 1 microgram per kilogram to about 5 grams per kilogram, about 100 micrograms per kilogram to about 500 milligrams per kilogram, or about 1 milligram per kilogram to about 50 milligrams per kilogram). It is furthermore understood that appropriate doses of one of these agents depend upon the potency of the agent with respect to the expression or activity to be modulated. Such appropriate doses can be determined using the assays described herein. When one or more of these agents is to be administered to an animal (*e.g.* a human) in order to modulate expression or activity of a polypeptide or nucleic acid of the invention, a physician, veterinarian, or researcher can, for example, prescribe a relatively low dose at first, subsequently increasing the dose until an appropriate response is obtained. In addition, it is understood that the specific dose level for any particular animal subject will depend upon a variety of factors including the activity of the specific agent employed, the age, body weight, general health, gender, and diet of the subject, the time of administration, the route of administration, the rate of excretion, any drug combination, and the degree of expression or activity to be modulated.

A pharmaceutical composition of the invention is formulated to be compatible with its intended route of administration. Examples of routes of administration include parenteral, *e.g.*, intravenous, intradermal, subcutaneous, oral (*e.g.*, inhalation), transdermal (topical), transmucosal, and rectal administration. Solutions or suspensions used for parenteral, intradermal, or subcutaneous application can include the following components: a sterile diluent such as water for injection, saline solution, fixed oils, polyethylene glycols, glycerine, propylene glycol or other synthetic solvents; antibacterial agents such as benzyl alcohol or methyl parabens; antioxidants such as ascorbic acid or sodium bisulfite; chelating agents such as ethylenediamine-tetraacetic acid; buffers such as acetates, citrates or phosphates and agents for the adjustment of

tonicity such as sodium chloride or dextrose. pH can be adjusted with acids or bases, such as hydrochloric acid or sodium hydroxide. The parenteral preparation can be enclosed in ampules, disposable syringes or multiple dose vials made of glass or plastic.

Pharmaceutical compositions suitable for injectable use include sterile aqueous solutions (where water soluble) or dispersions and sterile powders for the extemporaneous preparation of sterile injectable solutions or dispersions. For intravenous administration, suitable carriers include physiological saline, bacteriostatic water, Cremophor EL (BASF; Parsippany, NJ) or phosphate buffered saline (PBS). In all cases, the composition must be sterile and should be fluid to the extent that easy syringability exists. It must be stable under the conditions of manufacture and storage and must be preserved against the contaminating action of microorganisms such as bacteria and fungi. The carrier can be a solvent or dispersion medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, and liquid polyethylene glycol, and the like), and suitable mixtures thereof. The proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance of the required particle size in the case of dispersion and by the use of surfactants. Prevention of the action of microorganisms can be achieved by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, ascorbic acid, thimerosal, and the like. In many cases, it will be preferable to include isotonic agents, for example, sugars, polyalcohols such as mannitol, sorbitol, or sodium chloride in the composition. Prolonged absorption of the injectable compositions can be brought about by including in the composition an agent which delays absorption, for example, aluminum monostearate and gelatin.

Sterile injectable solutions can be prepared by incorporating the active compound (*e.g.*, a polypeptide or antibody) in the required amount in an appropriate solvent with one or a combination of ingredients enumerated above, as required, followed by filtered sterilization. Generally, dispersions are prepared by incorporating the active compound into a sterile vehicle which contains a basic dispersion medium, and then incorporating the required other ingredients from those enumerated above. In the case of sterile powders for the preparation of sterile injectable solutions, the preferred methods of preparation are vacuum drying and freeze-drying which yields a powder of the active ingredient plus any additional desired ingredient from a previously sterile-filtered solution thereof.

Oral compositions generally include an inert diluent or an edible carrier. They can be enclosed in gelatin capsules or compressed into tablets. For the purpose of oral therapeutic administration, the active compound can be incorporated with excipients and used in the form of tablets, troches, or capsules. Oral compositions can also be prepared

using a fluid carrier for use as a mouthwash, wherein the compound in the fluid carrier is applied orally and swished and expectorated or swallowed.

Pharmaceutically compatible binding agents, and/or adjuvant materials can be included as part of the composition. The tablets, pills, capsules, troches, and the like can contain any of the following ingredients, or compounds of a similar nature: a binder such as microcrystalline cellulose, gum tragacanth or gelatin; an excipient such as starch or lactose, a disintegrating agent such as alginic acid, Primogel, or corn starch; a lubricant such as magnesium stearate or Sterotes; a glidant such as colloidal silicon dioxide; a sweetening agent such as sucrose or saccharin; or a flavoring agent such as peppermint, methyl salicylate, or orange flavoring.

For administration by inhalation, the compounds are delivered in the form of an aerosol spray from a pressurized container or dispenser which contains a suitable propellant, *e.g.*, a gas such as carbon dioxide, or a nebulizer.

Systemic administration can also be by transmucosal or transdermal means. For transmucosal or transdermal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art, and include, for example, for transmucosal administration, detergents, bile salts, and fusidic acid derivatives. Transmucosal administration can be accomplished through the use of nasal sprays or suppositories. For transdermal administration, the active compounds are formulated into ointments, salves, gels, or creams as generally known in the art.

The compounds can also be prepared in the form of suppositories (*e.g.*, with conventional suppository bases such as cocoa butter and other glycerides) or retention enemas for rectal delivery.

In one embodiment, the active compounds are prepared with carriers that will protect the compound against rapid elimination from the body, such as a controlled release formulation, including implants and microencapsulated delivery systems. Biodegradable, biocompatible polymers can be used, such as ethylene vinyl acetate, polyanhydrides, polyglycolic acid, collagen, polyorthoesters, and polylactic acid. Methods for preparation of such formulations will be apparent to those skilled in the art. The materials can also be obtained commercially from Alza Corporation and Nova Pharmaceuticals, Inc. Liposomal suspensions (including liposomes having monoclonal antibodies incorporated therein or thereon) can also be used as pharmaceutically acceptable carriers. These can be prepared according to methods known to those skilled in the art, for example, as described in U.S. Patent No. 4,522,811.

It is especially advantageous to formulate oral or parenteral compositions in dosage unit form for ease of administration and uniformity of dosage. Dosage unit form as used herein refers to physically discrete units suited as unitary dosages for the subject to be treated; each unit containing a predetermined quantity of active compound calculated to produce the desired therapeutic effect in association with the required pharmaceutical carrier. The specification for the dosage unit forms of the invention are dictated by and directly dependent on the unique characteristics of the active compound and the particular therapeutic effect to be achieved, and the limitations inherent in the art of compounding such an active compound for the treatment of individuals.

For antibodies, the preferred dosage is 0.1 mg/kg to 100 mg/kg of body weight (generally 10 mg/kg to 20 mg/kg). If the antibody is to act in the brain, a dosage of 50 mg/kg to 100 mg/kg is usually appropriate. Generally, partially human antibodies and fully human antibodies have a longer half-life within the human body than other antibodies. Accordingly, lower dosages and less frequent administration is often possible. Modifications such as lipidation can be used to stabilize antibodies and to enhance uptake and tissue penetration (*e.g.*, into the breast epithelium). A method for lipidation of antibodies is described by Cruikshank *et al.* (1997) *J. Acquired Immune Deficiency Syndromes and Human Retrovirology* 14:193.

The nucleic acid molecules corresponding to a marker gene of the invention can be inserted into vectors and used as gene therapy vectors. Gene therapy vectors can be delivered to a subject by, for example, intravenous injection, local administration (U.S. Patent 5,328,470), or by stereotactic injection (see, *e.g.*, Chen *et al.*, 1994, *Proc. Natl. Acad. Sci. USA* 91:3054-3057). The pharmaceutical preparation of the gene therapy vector can include the gene therapy vector in an acceptable diluent, or can comprise a slow release matrix in which the gene delivery vehicle is imbedded. Alternatively, where the complete gene delivery vector can be produced intact from recombinant cells, *e.g.* retroviral vectors, the pharmaceutical preparation can include one or more cells which produce the gene delivery system.

The pharmaceutical compositions can be included in a container, pack, or dispenser together with instructions for administration.

V. Computer Readable Means and Arrays

The present invention also provides computer readable media comprising the nucleic acid sequence of a marker gene of the invention and the amino acid sequence of a marker protein of the invention (hereinafter collectively "sequence information of the present invention"). As used herein, "computer readable media" refers to any medium that can be read and accessed directly by a computer. Such media include, but are not

limited to: magnetic storage media, such as floppy discs, hard disc storage medium, and magnetic tape; optical storage media such as CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories such as magnetic/optical storage media. The skilled artisan will readily appreciate how any of the presently known computer readable mediums can be used to create a manufacture comprising computer readable medium having recorded thereon sequence information of the present invention.

As used herein, "recorded" refers to a process for storing information on computer readable medium. Those skilled in the art can readily adopt any of the presently known methods for recording information on computer readable medium to generate manufactures comprising the sequence information of the present invention.

A variety of data processor programs and formats can be used to store the sequence information of the present invention on computer readable medium. For example, the sequence information of the present invention can be represented in a word processing text file, formatted in commercially-available software such as WordPerfect and MicroSoft Word, or represented in the form of an ASCII file, stored in a database application, such as DB2, Sybase, Oracle, or the like. Any number of data processor structuring formats (*e.g.*, text file or database) may be adapted in order to obtain computer readable medium having recorded thereon the sequence information of the present invention.

By providing the sequence information of the present invention in computer readable form, one can routinely access the sequence information for a variety of purposes. For example, one skilled in the art can use the nucleotide or amino acid sequences of a marker gene of the invention in computer readable form to compare a target sequence or target structural motif with the sequence information stored within the data storage means. Search means are used to identify fragments or regions of the marker gene or protein sequence of the invention which match a particular target sequence or target motif.

The invention also includes an array comprising the nucleotide sequence of a marker gene of the present invention. The array can be used to assay expression of one or more genes, including the marker gene, in the array. In one embodiment, the array can be used to assay gene expression in a tissue to ascertain tissue specificity of genes in the array. In this manner, up to about 7600 genes can be simultaneously assayed for expression. This allows a profile to be developed showing a battery of genes specifically expressed in one or more tissues.

In addition to such qualitative determination, the invention allows the quantitation of marker gene expression. Thus, not only tissue specificity, but also the level of expression of a battery of genes in the tissue is ascertainable. Thus, marker

genes can be grouped on the basis of their tissue expression *per se* and level of expression in that tissue. This is useful, for example, in ascertaining the relationship of gene expression between or among tissues. Thus, one tissue can be perturbed and the effect on marker gene expression in a second tissue can be determined. In this context, the effect of one cell type on another cell type in response to a biological stimulus can be determined. Such a determination is useful, for example, to know the effect of cell-cell interaction at the level of gene expression. If an agent is administered therapeutically to treat one cell type but has an undesirable effect on another cell type, the invention provides an assay to determine the molecular basis of the undesirable effect and thus provides the opportunity to co-administer a counteracting agent or otherwise treat the undesired effect. Similarly, even within a single cell type, undesirable biological effects can be determined at the molecular level. Thus, the effects of an agent on expression of other than the target gene can be ascertained and counteracted.

In another embodiment, the array can be used to monitor the time course of expression of one or more marker genes in the array. This can occur in various biological contexts, as disclosed herein, for example in development and differentiation of breast cancer, tumor progression, progression of other diseases, *in vitro* processes, such a cellular transformation and senescence, autonomic neural and neurological processes, such as, for example, pain and appetite, and cognitive functions, such as learning or memory.

The array is also useful for ascertaining the effect of the expression of a marker gene on the expression of other genes in the same cell or in different cells. This provides, for example, for a selection of alternate molecular targets for therapeutic intervention if the ultimate or downstream target cannot be regulated.

The array is also useful for ascertaining differential expression patterns of one or more marker genes in normal and abnormal cells. This provides a battery of marker genes that could serve as a molecular target for diagnosis or therapeutic intervention.

VI. Predictive Medicine

The present invention pertains to the field of predictive medicine in which diagnostic assays, prognostic assays, pharmacogenomics, and monitoring clinical trails are used for prognostic (predictive) purposes to thereby treat an individual prophylactically. Accordingly, one aspect of the present invention relates to diagnostic assays for determining the level of expression of polypeptides or nucleic acids encoded by one or more marker genes of the invention, in order to determine whether an individual is at risk of developing breast cancer. Such assays can be used for prognostic

or predictive purposes to thereby prophylactically treat an individual prior to the onset of the cancer.

Yet another aspect of the invention pertains to monitoring the influence of agents (*e.g.*, drugs or other compounds administered either to inhibit breast cancer or to treat or prevent any other disorder {*i.e.* in order to understand any breast carcinogenic effects that such treatment may have}) on the expression or activity of a marker gene of the invention in clinical trials. These and other agents are described in further detail in the following sections.

A. Diagnostic Assays

An exemplary method for detecting the presence or absence of a polypeptide or nucleic acid encoded by a marker gene of the invention in a biological sample involves obtaining a biological sample (*e.g.* a biopsy of breast tissue or a lump) from a test subject and contacting the biological sample with a compound or an agent capable of detecting the polypeptide or nucleic acid (*e.g.*, mRNA, genomic DNA, or cDNA). The detection methods of the invention can thus be used to detect mRNA, protein, cDNA, or genomic DNA, for example, in a biological sample *in vitro* as well as *in vivo*. For example, *in vitro* techniques for detection of mRNA include Northern hybridizations and *in situ* hybridizations. *In vitro* techniques for detection of a polypeptide encoded by a marker gene of the invention include enzyme linked immunosorbent assays (ELISAs), Western blots, immunoprecipitations, immunohistochemistry and immunofluorescence. *In vitro* techniques for detection of genomic DNA include Southern hybridizations. Furthermore, *in vivo* techniques for detection of a polypeptide encoded by a marker gene of the invention include introducing into a subject a labeled antibody directed against the polypeptide. For example, the antibody can be labeled with a radioactive marker whose presence and location in a subject can be detected by standard imaging techniques.

A general principle of such diagnostic and prognostic assays involves preparing a sample or reaction mixture that may contain a protein or nucleotide encoded by a marker gene, and a probe, under appropriate conditions and for a time sufficient to allow the protein or nucleotide and probe to interact and bind, thus forming a complex that can be removed and/or detected in the reaction mixture. These assays can be conducted in a variety of ways.

For example, one method to conduct such an assay would involve anchoring the protein or nucleotide on the one hand or probe on the other onto a solid phase support, also referred to as a substrate, and detecting complexes comprising the target marker gene or protein and the probe anchored on the solid phase at the end of the reaction. In one embodiment of such a method, a sample from a subject, which is to be assayed for

presence and/or concentration of the proteins or nucleotides encoded by the marker genes, can be anchored onto a carrier or solid phase support. In another embodiment, the reverse situation is possible, in which the probe can be anchored to a solid phase and a sample from a subject can be allowed to react as an unanchored component of the assay.

There are many established methods for anchoring assay components to a solid phase. These include, without limitation, the protein or nucleotide encoded by the marker gene or probe molecules which are immobilized through conjugation of biotin and streptavidin. Such biotinylated assay components can be prepared from biotin-NHS (N-hydroxy-succinimide) using techniques known in the art (*e.g.*, biotinylation kit, Pierce Chemicals, Rockford, IL), and immobilized in the wells of streptavidin-coated 96 well plates (Pierce Chemical). In certain embodiments, the surfaces with immobilized assay components can be prepared in advance and stored.

Other suitable carriers or solid phase supports for such assays include any material capable of binding the class of molecule to which the marker gene protein or nucleotide or probe belongs. Well-known supports or carriers include, but are not limited to, glass, polystyrene, nylon, polypropylene, nylon, polyethylene, dextran, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

In order to conduct assays with the above mentioned approaches, the non-immobilized component is added to the solid phase upon which the second component is anchored. After the reaction is complete, uncomplexed components may be removed (*e.g.*, by washing) under conditions such that any complexes formed will remain immobilized upon the solid phase. The detection of complexes comprising the marker protein or nucleotide sequence and the probe anchored to the solid phase can be accomplished in a number of methods outlined herein.

In a preferred embodiment, the probe, when it is the unanchored assay component, can be labeled for the purpose of detection and readout of the assay, either directly or indirectly, with detectable labels discussed herein and which are well-known to one skilled in the art.

It is also possible to directly detect complexes comprising a marker protein or nucleotide sequence and the probe without further manipulation or labeling of either component (the marker protein or nucleotide or the probe), for example by utilizing the technique of fluorescence energy transfer (see, for example, Lakowicz *et al.*, U.S. Patent No. 5,631,169; Stavrianopoulos, *et al.*, U.S. Patent No. 4,868,103). A fluorophore label on the first, 'donor' molecule is selected such that, upon excitation with incident light of appropriate wavelength, its emitted fluorescent energy will be absorbed by a fluorescent label on a second 'acceptor' molecule, which in turn is able to fluoresce due to the

absorbed energy. Alternately, the 'donor' protein molecule may simply utilize the natural fluorescent energy of tryptophan residues. Labels are chosen that emit different wavelengths of light, such that the 'acceptor' molecule label may be differentiated from that of the 'donor'. Since the efficiency of energy transfer between the labels is related to the distance separating the molecules, spatial relationships between the molecules can be assessed. In a situation in which binding occurs between the molecules, the fluorescent emission of the 'acceptor' molecule label in the assay should be maximal. An FET binding event can be conveniently measured through standard fluorometric detection means well known in the art (*e.g.*, using a fluorimeter).

In another embodiment, determination of the ability of a probe to recognize a protein or nucleotide encoded by a marker gene can be accomplished without labeling either assay component (probe or marker gene) by utilizing a technology such as real-time Biomolecular Interaction Analysis (BIA) (see, *e.g.*, Sjolander, S. and Urbaniczky, C., 1991, *Anal. Chem.* 63:2338-2345 and Szabo *et al.*, 1995, *Curr. Opin. Struct. Biol.* 5:699-705). As used herein, "BIA" or "surface plasmon resonance" is a technology for studying biospecific interactions in real time, without labeling any of the interactants (*e.g.*, BIAcore). Changes in the mass at the binding surface (indicative of a binding event) result in alterations of the refractive index of light near the surface (the optical phenomenon of surface plasmon resonance (SPR)), resulting in a detectable signal which can be used as an indication of real-time reactions between biological molecules.

Alternatively, in another embodiment, analogous diagnostic and prognostic assays can be conducted with the marker protein or nucleotide and the probe as solutes in a liquid phase. In such an assay, complexes comprising the marker protein or nucleotide and the probe are separated from uncomplexed components by any of a number of standard techniques, including but not limited to: differential centrifugation, chromatography, electrophoresis and immunoprecipitation. In differential centrifugation, such complexes may be separated from uncomplexed assay components through a series of centrifugal steps, due to the different sedimentation equilibria of complexes based on their different sizes and densities (see, for example, Rivas, G., and Minton, A.P., 1993, *Trends Biochem Sci.* 18(8):284-7). Standard chromatographic techniques may also be utilized to separate such complexes from uncomplexed components. For example, gel filtration chromatography separates molecules based on size, and through the utilization of an appropriate gel filtration resin in a column format, for example, the relatively larger complexes may be separated from the relatively smaller uncomplexed components. Similarly, the different charge properties of such complexes as compared to the uncomplexed components may be exploited to differentiate the complexes from uncomplexed components, for example through the

utilization of ion-exchange chromatography resins. Such resins and chromatographic techniques are well known to one skilled in the art (see, *e.g.*, Heegaard, N.H., 1998, *J. Mol. Recognit.* Winter 11(1-6):14___; Hage, D.S., and Tweed, S.A. *J Chromatogr B Biomed Sci Appl* 1997 Oct 10;699(1-2):499-525). Gel electrophoresis may also be employed to separate such complexes from unbound components (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York, 1987-1999). In this technique, protein or nucleic acid complexes are separated based on size or charge, for example. In order to maintain the binding interaction during the electrophoretic process, non-denaturing gel matrix materials and conditions in the absence of reducing agent are typically preferred. Appropriate conditions to the particular assay and components thereof will be well known to one skilled in the art.

In a particular embodiment, the level of mRNA encoded by a marker gene can be determined both by *in situ* and by *in vitro* formats in a biological sample using methods known in the art. The term "biological sample" is intended to include tissues, cells, biological fluids and isolates thereof, isolated from a subject, as well as tissues, cells and fluids present within a subject. Many expression detection methods use isolated RNA. For *in vitro* methods, any RNA isolation technique that does not select against the isolation of mRNA can be utilized for the purification of RNA from breast cells (see, *e.g.*, Ausubel *et al.*, ed., *Current Protocols in Molecular Biology*, John Wiley & Sons, New York 1987-1999). Additionally, large numbers of tissue samples can readily be processed using techniques well known to those of skill in the art, such as, for example, the single-step RNA isolation process of Chomczynski (1989, U.S. Patent No. 4,843,155).

The isolated mRNA can be used in hybridization or amplification assays that include, but are not limited to, Southern or Northern analyses, polymerase chain reaction analyses and probe arrays. One preferred diagnostic method for the detection of mRNA levels involves contacting the isolated mRNA with a nucleic acid molecule (probe) that can hybridize to the mRNA encoded by the gene being detected. The nucleic acid probe can be, for example, a full-length cDNA, or a portion thereof, such as an oligonucleotide of at least 7, 15, 30, 50, 100, 250 or 500 nucleotides in length and sufficient to specifically hybridize under stringent conditions to a mRNA encoded by a marker gene of the present invention. Other suitable probes for use in the diagnostic assays of the invention are described herein. Hybridization of a mRNA with the probe indicates that the marker gene in question is expressed.

In one format, the mRNA is immobilized on a solid surface and contacted with a probe, for example by running the isolated mRNA on an agarose gel and transferring the mRNA from the gel to a membrane, such as nitrocellulose. In an alternative format, the

probe(s) are immobilized on a solid surface and the mRNA is contacted with the probe(s), for example, in an Affymetrix gene chip array. A skilled artisan can readily adapt known mRNA detection methods for use in detecting the level of mRNA encoded by the a marker gene of the present invention.

An alternative method for determining the level of mRNA encoded by a marker gene of the present invention in a sample involves the process of nucleic acid amplification, *e.g.*, by rtPCR (the experimental embodiment set forth in Mullis, 1987, U.S. Patent No. 4,683,202), ligase chain reaction (Barany, 1991, *Proc. Natl. Acad. Sci. USA,* 88:189-193), self sustained sequence replication (Guatelli *et al.*, 1990, *Proc. Natl. Acad. Sci. USA* 87:1874-1878), transcriptional amplification system (Kwoh *et al.*, 1989, *Proc. Natl. Acad. Sci. USA* 86:1173-1177), Q-Beta Replicase (Lizardi *et al.*, 1988, *Bio/Technology* 6:1197), rolling circle replication (Lizardi *et al.*, U.S. Patent No. 5,854,033) or any other nucleic acid amplification method, followed by the detection of the amplified molecules using techniques well known to those of skill in the art. These detection schemes are especially useful for the detection of nucleic acid molecules if such molecules are present in very low numbers. As used herein, amplification primers are defined as being a pair of nucleic acid molecules that can anneal to 5' or 3' regions of a gene (plus and minus strands, respectively, or vice-versa) and contain a short region in between. In general, amplification primers are from about 10 to 30 nucleotides in length and flank a region from about 50 to 200 nucleotides in length. Under appropriate conditions and with appropriate reagents, such primers permit the amplification of a nucleic acid molecule comprising the nucleotide sequence flanked by the primers.

For *in situ* methods, mRNA does not need to be isolated from the breast cells prior to detection. In such methods, a cell or tissue sample is prepared/processed using known histological methods. The sample is then immobilized on a support, typically a glass slide, and then contacted with a probe that can hybridize to mRNA encoded by the marker gene.

As an alternative to making determinations based on the absolute expression level of the marker gene, determinations may be based on the normalized expression level of the marker gene. Expression levels are normalized by correcting the absolute expression level of a marker gene by comparing its expression to the expression of a gene that is not a marker gene, *e.g.*, a housekeeping gene that is constitutively expressed. Suitable genes for normalization include housekeeping genes such as the actin gene, or epithelial cell-specific genes. This normalization allows the comparison of the expression level in one sample, *e.g.*, a patient sample, to another sample, *e.g.*, a non-breast cancer sample, or between samples from different sources.

Alternatively, the expression level can be provided as a relative expression level. To determine a relative expression level of a marker gene, the level of expression of the marker gene is determined for 10 or more samples of normal versus cancer cell isolates, preferably 50 or more samples, prior to the determination of the expression level for the sample in question. The mean expression level of each of the genes assayed in the larger number of samples is determined and this is used as a baseline expression level for the marker gene. The expression level of the marker gene determined for the test sample (absolute level of expression) is then divided by the mean expression value obtained for that marker gene. This provides a relative expression level.

Preferably, the samples used in the baseline determination will be from breast cancer or from non-breast cancer cells of breast tissue. The choice of the cell source is dependent on the use of the relative expression level. Using expression found in normal tissues as a mean expression score aids in validating whether the marker gene assayed is breast specific (versus normal cells). In addition, as more data is accumulated, the mean expression value can be revised, providing improved relative expression values based on accumulated data. Expression data from breast cells provides a means for grading the severity of the breast cancer state.

In another embodiment of the present invention, a polypeptide encoded by a marker gene is detected. A preferred agent for detecting a polypeptide of the invention is an antibody capable of binding to a polypeptide encoded by a marker gene of the invention, preferably an antibody with a detectable label. Antibodies can be polyclonal, or more preferably, monoclonal. An intact antibody, or a fragment thereof (*e.g.*, Fab or $F(ab')_2$) can be used. The term "labeled", with regard to the probe or antibody, is intended to encompass direct labeling of the probe or antibody by coupling (*i.e.*, physically linking) a detectable substance to the probe or antibody, as well as indirect labeling of the probe or antibody by reactivity with another reagent that is directly labeled. Examples of indirect labeling include detection of a primary antibody using a fluorescently labeled secondary antibody and end-labeling of a DNA probe with biotin such that it can be detected with fluorescently labeled streptavidin.

Proteins from breast cells can be isolated using techniques that are well known to those of skill in the art. The protein isolation methods employed can, for example, be such as those described in Harlow and Lane (Harlow and Lane, 1988, *Antibodies: A Laboratory Manual*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, New York).

A variety of formats can be employed to determine whether a sample contains a protein that binds to a given antibody. Examples of such formats include, but are not limited to, enzyme immunoassay (EIA), radioimmunoassay (RIA), Western blot

analysis, immunohistochemistry and enzyme linked immunoabsorbant assay (ELISA). A skilled artisan can readily adapt known protein/antibody detection methods for use in determining whether breast cells express a marker gene of the present invention.

In one format, antibodies, or antibody fragments, can be used in methods such as Western blots, immunohistochemistry or immunofluorescence techniques to detect the expressed proteins. In such uses, it is generally preferable to immobilize either the antibody, proteins, or cells containing proteins, on a solid support. Well-known supports or carriers include glass, polystyrene, polypropylene, polyethylene, dextran, nylon, amylases, natural and modified celluloses, polyacrylamides, gabbros, and magnetite.

One skilled in the art will know many other suitable carriers for binding antibody or antigen, and will be able to adapt such support for use with the present invention. For example, protein isolated from breast cells can be run on a polyacrylamide gel electrophoresis and immobilized onto a solid phase support such as nitrocellulose. The support can then be washed with suitable buffers followed by treatment with the detectably labeled antibody. The solid phase support can then be washed with the buffer a second time to remove unbound antibody. The amount of bound label on the solid support can then be detected by conventional means.

The invention also encompasses kits for detecting the presence of a polypeptide or nucleic acid encoded by a marker gene of the invention in a biological sample (*e.g.* a breast-associated body fluid). Such kits can be used to determine if a subject is suffering from or is at increased risk of developing breast cancer. For example, the kit can comprise a labeled compound or agent capable of detecting a polypeptide or an mRNA encoding a polypeptide encoded by a marker gene of the invention in a biological sample and means for determining the amount of the polypeptide or mRNA in the sample (*e.g.*, an antibody which binds the polypeptide or an oligonucleotide probe which binds to DNA or mRNA encoding the polypeptide). Kits can also include instructions for interpreting the results obtained using the kit.

For antibody-based kits, the kit can comprise, for example: (1) a first antibody (*e.g.*, attached to a solid support) which binds to a polypeptide corresponding to a marker gene of the invention; and, optionally, (2) a second, different antibody which binds to either the polypeptide or the first antibody and is conjugated to a detectable label.

For oligonucleotide-based kits, the kit can comprise, for example: (1) an oligonucleotide, *e.g.*, a detectably labeled oligonucleotide, which hybridizes to a nucleic acid sequence encoding a polypeptide encoded by a marker gene of the invention or (2) a pair of primers useful for amplifying a nucleic acid molecule encoded by a marker

gene of the invention. The kit can also comprise, *e.g.*, a buffering agent, a preservative, or a protein stabilizing agent. The kit can further comprise components necessary for detecting the detectable label (*e.g.*, an enzyme or a substrate). The kit can also contain a control sample or a series of control samples which can be assayed and compared to the test sample. Each component of the kit can be enclosed within an individual container and all of the various containers can be within a single package, along with instructions for interpreting the results of the assays performed using the kit.

B. Pharmacogenomics

Agents or modulators which have a stimulatory or inhibitory effect on expression of a marker gene of the invention can be administered to individuals to treat (prophylactically or therapeutically) breast cancer in the patient. In conjunction with such treatment, the pharmacogenomics (*i.e.*, the study of the relationship between an individual's genotype and that individual's response to a foreign compound or drug) of the individual may be considered. Differences in metabolism of therapeutics can lead to severe toxicity or therapeutic failure by altering the relation between dose and blood concentration of the pharmacologically active drug. Thus, the pharmacogenomics of the individual permits the selection of effective agents (*e.g.*, drugs) for prophylactic or therapeutic treatments based on a consideration of the individual's genotype. Such pharmacogenomics can further be used to determine appropriate dosages and therapeutic regimens. Accordingly, the level of expression of a marker gene of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual.

Pharmacogenomics deals with clinically significant variations in the response to drugs due to altered drug disposition and abnormal action in affected persons. See, *e.g.*, Linder (1997) *Clin. Chem.* 43(2):254-266. In general, two types of pharmacogenetic conditions can be differentiated. Genetic conditions transmitted as a single factor altering the way drugs act on the body are referred to as "altered drug action." Genetic conditions transmitted as single factors altering the way the body acts on drugs are referred to as "altered drug metabolism". These pharmacogenetic conditions can occur either as rare defects or as polymorphisms. For example, glucose-6-phosphate dehydrogenase (G6PD) deficiency is a common inherited enzymopathy in which the main clinical complication is hemolysis after ingestion of oxidant drugs (anti-malarials, sulfonamides, analgesics, nitrofurans) and consumption of fava beans.

As an illustrative embodiment, the activity of drug metabolizing enzymes is a major determinant of both the intensity and duration of drug action. The discovery of genetic polymorphisms of drug metabolizing enzymes (*e.g.*, N-acetyltransferase 2 (NAT

2) and cytochrome P450 enzymes CYP2D6 and CYP2C19) has provided an explanation as to why some patients do not obtain the expected drug effects or show exaggerated drug response and serious toxicity after taking the standard and safe dose of a drug. These polymorphisms are expressed in two phenotypes in the population, the extensive metabolizer (EM) and poor metabolizer (PM). The prevalence of PM is different among different populations. For example, the gene coding for CYP2D6 is highly polymorphic and several mutations have been identified in PM, which all lead to the absence of functional CYP2D6. Poor metabolizers of CYP2D6 and CYP2C19 quite frequently experience exaggerated drug response and side effects when they receive standard doses. If a metabolite is the active therapeutic moiety, a PM will show no therapeutic response, as demonstrated for the analgesic effect of codeine mediated by its CYP2D6-formed metabolite morphine. The other extreme are the so called ultra-rapid metabolizers who do not respond to standard doses. Recently, the molecular basis of ultra-rapid metabolism has been identified to be due to CYP2D6 gene amplification.

Thus, the level of expression of a marker gene of the invention in an individual can be determined to thereby select appropriate agent(s) for therapeutic or prophylactic treatment of the individual. In addition, pharmacogenetic studies can be used to apply genotyping of polymorphic alleles encoding drug-metabolizing enzymes to the identification of an individual's drug responsiveness phenotype. This knowledge, when applied to dosing or drug selection, can avoid adverse reactions or therapeutic failure and thus enhance therapeutic or prophylactic efficiency when treating a subject with a modulator of expression of a marker gene of the invention.

This invention also provides a process for preparing a database comprising at least one of the marker genes set forth in Table 1. For example, the polynucleotide sequences are stored in a digital storage medium such that a data processing system for standardized representation of the genes that identify a breast cancer cell is compiled. The data processing system is useful to analyze gene expression between two cells by first selecting a cell suspected of being of a neoplastic phenotype or genotype and then isolating polynucleotides from the cell. The isolated polynucleotides are sequenced. The sequences from the sample are compared with the sequence(s) present in the database using homology search techniques. Greater than 90%, more preferably greater than 95% and more preferably, greater than or equal to 97% sequence identity between the test sequence and the polynucleotides of the present invention is a positive indication that the polynucleotide has been isolated from a breast cancer cell as defined above.

In an alternative embodiment, the polynucleotides of this invention are sequenced and the information regarding sequence and in some embodiments, relative expression, is stored in any functionally relevant program, *e.g.*, in Compare Report using

the SAGE software (available though Dr. Ken Kinzler at John Hopkins University). The Compare Report provides a tabulation of the polynucleotide sequences and their abundance for the samples normalized to a defined number of polynucleotides per library (say 25,000). This is then imported into MS-ACCESS either directly or via copying the data into an Excel spreadsheet first and then from there into MS-ACCESS for additional manipulations. Other programs such as SYBASE or Oracle that permit the comparison of polynucleotide numbers could be used as alternatives to MS-ACCESS. Enhancements to the software can be designed to incorporate these additional functions. These functions consist in standard Boolean, algebraic, and text search operations, applied in various combinations to reduce a large input set of polynucleotides to a manageable subset of a polynucleotide of specifically defined interest.

One skilled in the art may create groups containing one or more project(s) by combining the counts of specific polynucleotides within a group (*e.g.*, GroupNormal = Normal1 + Normal2, GroupTumor1 + TumorCellLine). Additional characteristic values are also calculated for each tag in the group (*e.g.*, average count, minimum count, maximum count). One skilled in the art may calculate individual tag count ratios between groups, for example the ratio of the average GroupNormal count to the average GroupTumor count for each polynucleotide. A statistical measure of the significance of observed differences in tag counts between groups may be calculated.

C. Monitoring Clinical Trials

Monitoring the influence of agents (*e.g.*, drug compounds) on the level of expression of a marker gene of the invention can be applied not only in basic drug screening, but also in clinical trials. For example, the effectiveness of an agent to affect marker gene expression can be monitored in clinical trials of subjects receiving treatment for breast cancer. In a preferred embodiment, the present invention provides a method for monitoring the effectiveness of treatment of a subject with an agent (*e.g.*, an agonist, antagonist, peptidomimetic, protein, peptide, nucleic acid, small molecule, or other drug candidate) comprising the steps of (i) obtaining a pre-administration sample from a subject prior to administration of the agent; (ii) detecting the level of expression of one or more selected marker genes of the invention in the pre-administration sample; (iii) obtaining one or more post-administration samples from the subject; (iv) detecting the level of expression of the marker gene(s) in the post-administration samples; (v) comparing the level of expression of the marker gene(s) in the pre-administration sample with the level of expression of the marker gene(s) in the post-administration sample or samples; and (vi) altering the administration of the agent to the subject

accordingly. For example, increased administration of the agent can be desirable to increase expression of the marker gene(s) to higher levels than detected, *i.e.*, to increase the effectiveness of the agent. Alternatively, decreased administration of the agent can be desirable to decrease expression of the marker gene(s) to lower levels than detected, *i.e.*, to decrease the effectiveness of the agent.

D. Surrogate Marker genes

The marker genes of the invention may serve as surrogate marker genes for one or more disorders or disease states or for conditions leading up to disease states, and in particular, breast cancer. As used herein, a "surrogate marker gene" is an objective biochemical marker gene which correlates with the absence or presence of a disease or disorder, or with the progression of a disease or disorder (*e.g.*, with the presence or absence of a tumor). The presence or quantity of such marker genes is independent of the disease. Therefore, these marker genes may serve to indicate whether a particular course of treatment is effective in lessening a disease state or disorder. Surrogate marker genes are of particular use when the presence or extent of a disease state or disorder is difficult to assess through standard methodologies (*e.g.*, early stage tumors), or when an assessment of disease progression is desired before a potentially dangerous clinical endpoint is reached (*e.g.*, an assessment of cardiovascular disease may be made using cholesterol levels as a surrogate marker gene, and an analysis of HIV infection may be made using HIV RNA levels as a surrogate marker gene, well in advance of the undesirable clinical outcomes of myocardial infarction or fully-developed AIDS). Examples of the use of surrogate marker genes in the art include: Koomen *et al.* (2000) *J. Mass. Spectrom.* 35: 258-264; and James (1994) *AIDS Treatment News Archive* 209.

The marker genes of the invention are also useful as pharmacodynamic marker genes. As used herein, a "pharmacodynamic marker gene" is an objective biochemical marker gene whose expression correlates specifically with drug effects. The presence or quantity of expression of a pharmacodynamic marker gene is not related to the disease state or disorder for which the drug is being administered; therefore, the presence or quantity of the marker gene expresson is indicative of the presence or activity of the drug in a subject. For example, expression of a pharmacodynamic marker gene may be indicative of the concentration of the drug in a biological tissue, in that the marker gene is either expressed or transcribed or not expressed or transcribed in that tissue in relationship to the level of the drug. In this fashion, the distribution or uptake of the drug may be monitored by assessing expression of the pharmacodynamic marker gene. Similarly, the presence or quantity of expression of the pharmacodynamic marker gene may be related to the presence or quantity of the metabolic product of a drug, such that

the presence or quantity of the marker gene expression is indicative of the relative breakdown rate of the drug *in vivo*. Pharmacodynamic marker genes are of particular use in increasing the sensitivity of detection of drug effects, particularly when the drug is administered in low doses. Since even a small amount of a drug may be sufficient to activate multiple rounds of marker gene transcription or expression, the amplified marker gene may be in a quantity which is more readily detectable than the drug itself. Also, expression of the marker gene may be more easily detected due to the nature of the marker gene itself; for example, using the methods described herein, antibodies may be employed in an immune-based detection system for a protein encoded by a marker gene, or marker gene-specific radiolabeled probes may be used to detect a mRNA encoded by a marker gene. Furthermore, the use of a pharmacodynamic marker gene may offer mechanism-based prediction of risk due to drug treatment beyond the range of possible direct observations. Examples of the use of pharmacodynamic marker genes in the art include: Matsuda *et al.* US 6,033,862; Hattis *et al.* (1991) *Env. Health Perspect.* 90: 229-238; Schentag (1999) *Am. J. Health-Syst. Pharm.* 56 Suppl. 3: S21-S24; and Nicolau (1999) *Am, J. Health-Syst. Pharm.* 56 Suppl. 3: S16-S20.

The marker genes of the invention are also useful as pharmacogenomic marker genes. As used herein, a "pharmacogenomic marker gene" is an objective biochemical marker gene whose expression correlates with a specific clinical drug response or susceptibility in a subject (see, e.g., McLeod *et al.* (1999) *Eur. J. Cancer* 35(12): 1650-1652). The presence or quantity of expression of the pharmacogenomic marker gene is related to the predicted response of the subject to a specific drug or class of drugs prior to administration of the drug. By assessing the presence or quantity of expression of one or more pharmacogenomic marker genes in a subject, a drug therapy which is most appropriate for the subject, or which is predicted to have a greater degree of success, may be selected. For example, based on the presence or quantity of RNA or protein encoded by a specific tumor marker genes in a subject, a drug or course of treatment may be selected that is optimized for the treatment of the specific tumor likely to be present in the subject. Similarly, the presence or absence of a specific sequence mutation in marker gene DNA may correlate with drug response. The use of pharmacogenomic marker genes therefore permits the application of the most appropriate treatment for each subject without having to administer the therapy.

VII. Experimental Protocol

This section describes the isolation of cDNA clones of marker genes.

Subtracted libraries were generated using a PCR based method that produced cDNAs of mRNAs that are present at a higher level in one mRNA population (the tester) than in a second mRNA population (the driver). Both tester and driver mRNA populations were converted into cDNA by reverse transcription, and then PCR amplified using the SMART PCR kit from Clontech. Tester and driver cDNAs were then hybridized using the PCR-Select cDNA subtraction kit from Clontech. This technique effected both a subtraction and normalization of the cDNA . Normalization approximately equalizes the copy numbers of low-abundance and high-abundance cDNA species. After generation of the subtracted libraries from the subtracted and normalized cDNA, 96 or more cDNA clones from each library were tested to confirm differential expression by reverse Southern hybridization.

Various subtracted libraries were constructed to isolated cDNA clones of different breast cancer marker genes. For isolating cDNA clones of genes expressed at high levels in aggressive or metastatic breast tumors, the subtracted libraries were constructed using tester cDNA generated from breast tumor tissues of patients having poor clinical outcome or aggressive tumors, or from cell lines derived from aggressive breast tumors, and driver cDNA generated from breast tumor tissues of patients having good clinical outcome or indolent tumors, or from cell lines derived from indolent breast tumors. "Poor clinical outcome" is a situation where the patient suffered cancer relapse within five years following breast cancer surgery. "Good clinical outcome" is a situation where the patient remained cancer free for over five years following breast cancer surgery. For isolating cDNA clones of genes expressed at high levels in non-aggressive or indolent breast tumors, the subtracted libraries were constructed using tester cDNA generated from breast tumor tissues of patients having good clinical outcome or indolent tumors, or from cell lines derived from indolent breast tumors, and driver cDNA generated from breast tumor tissues of patients having poor clinical outcome or having aggressive breast tumors, or from cell lines derived from aggressive breast tumors.

In Situ Hybridization Methods

Tissue microarrays (TMAs) were constructed using 4 punches of formalin-fixed and paraffin-embedded tumor samples, arrayed on a total of 5 slides. The TMAs were cut and 4 micron thick sections were put onto glass slides. Probes were constructed for radioactive *in situ* hybridization (ISH) by designing 26mer oligos (flanked with T7 RNA polymerase sequence for transcription) to the 3' and 5' ends of the subtractive library

clone insert and generating a template via polymerase chain reaction (PCR). Hybridizations were performed with single-stranded 35S-radiolabeled (5×10^7 cpm/mL) cRNA probes using the PCR-generated insert as a template. ISH was performed according to the methods in Uncan LM , *et.al.,* Melastatin expression and prognosis in cutaneous malignant melanoma. *J Clin Oncol.* (2001) Jan 15;19(2):568-76, which is incorporated herein by reference.

In the poor outcome ISH results, 20 out of 40 poor outcome IDC T1-2N0 tumors tested expressed the marker gene 1041, while in the poor outcome TP results, 6 out of 16 poor outcome IDC T1-2N0 tumors tested expressed the marker gene 1041. In the good outcome ISH results, 9 out of 40 good outcome IDC T1-2N0 tumors tested expressed the marker gene 1041, while in the good outcome TP results, 1 out of 22 good outcome IDC T1-2N0 tumors tested expressed the marker gene 1041. This data suggests that expression of marker gene 1041 is associated with poor clinical outcome.

Summary of the Marker Genes

Table 1 lists 1417 marker genes of the invention. All these marker genes may be used to diagnose breast cancer. Specifically, breast cancers may be diagnosed by examining a patient for over-expression of one or more of these marker genes. The isolation of cDNA clones of these marker genes and certain particular use of these marker genes are further described below.

The cDNA clones of marker genes 1-48 were isolated from subtracted libraries using cDNA from aggressive breast tumor cell lines SKBR-3, HS578T, BT549, MDA321 and MDA435 as the tester, and cDNA from indolent breast tumor cell lines MCF-7, T47D, ZR75 as the driver. These marker genes may be particularly useful in diagnosing aggressive breast tumors. Specifically, aggressive breast tumors may be detected by examining a patient for over-expression of any of these marker genes, more preferably marker genes 31-41, and most preferably marker genes 1-30.

The cDNA clones of marker genes 49-112 were isolated from subtracted libraries using cDNA from indolent breast tumor cell lines MCF-7, T47D, ZR75 as the tester and cDNA from aggressive breast tumor cell lines SKBR-3, HS578T, BT549, MDA321, MDA435 as the driver. These marker genes may be particularly useful in diagnosing indolent breast tumors. Specifically, indolent breast tumors may be detected by examining a patient for over-expression of any of these marker genes, more preferably marker genes 62-101, and most preferably marker genes 49-60.

The cDNA clones of marker genes 113-394 were isolated from subtracted libraries using cDNA from breast tumor tissues of patients having poor clinical outcome as the tester and cDNA from tumor tissues of patients having good clinical outcome as

the driver. Accordingly, these marker genes may be particularly useful in diagnosing metastatic or aggressive breast tumors or to predict cancer relapse following breast cancer surgery. Specifically, breast cancer metastasis or aggressive breast tumors can be detected, or increased chance of cancer relapse following breast cancer surgery can be predicted, by examining a patient for over-expression of any of these marker genes, preferably marker genes 132-365, more preferably marker genes 126-131 and most preferably marker genes 113-125.

The cDNA clones of marker genes 395-506 were isolated from subtracted libraries using cDNA from breast tumor tissues of patients having good clinical outcome as the tester and cDNA from breast tumor tissues of patients having poor clinical outcome as the driver source. Accordingly, these marker genes may be used to diagnose indolent tumors or to predict efficacy or success of breast cancer surgery. Specifically, indolent breast tumors can be detected or the success of breast cancer surgery can be predicted, by examining a patient for over-expression of any of these marker genes, more preferably marker genes 476-497 and most preferably marker genes 395-475.

The cDNA clones of marker genes 507-611 were isolated from subtracted libraries using cDNA from breast tumor lymph node metastatic tissues as the tester source and cDNA from indolent (colloid and tubular) breast tumor tissues as the driver source. Accordingly, these marker genes can be used to diagnose breast cancer metastasis or aggressive breast tumors. Specifically, breast cancer metastasis or aggressive breast tumors can be detected by examining a patient for over-expression of any of these marker genes, more preferably marker genes 550-603 and most preferably marker genes 507-603.

The cDNA clones of marker genes 612-767 were isolated from subtracted libraries using cDNA from indolent (colloid and tubular) breast tumor samples as the tester source and cDNA from breast tumor lymph node metastatic tissues as the driver source. Accordingly, these marker genes can be used to diagnose indolent breast tumors. Specifically, indolent breast tumors can be detected by examining a patient for over-expression of any of these marker genes, more preferably marker genes 710-762 and most preferably marker genes 612-709.

The cDNA clones of marker genes 768-1055 were isolated from subtracted libraries using cDNA from T1N1 breast tumor tissues (i.e., tissues of breast tumors 2.0 cm or less in greatest dimension with regional lymph node metastasis) as the tester source and cDNA from T1N0 breast tumor tissues (i.e., tissues of breast tumors 2.0 cm or less in greatest dimension with no regional lymph node metastasis) of patients having good clinical outcome as the driver source. Accordingly, these marker genes can be used to diagnose aggressive or metastatic breast tumors. Specifically, aggressive or

metastatic breast tumors can be detected by examining a patient for over-expression of any of these marker genes, preferably marker genes 839-1029, more preferably marker genes 826-838, and most preferably marker genes 768-825.

The cDNA clones of marker genes 1056-1417 were isolated from subtracted libraries using cDNA from breast tumor tissues of patients having good clinical outcome as the tester source and cDNA from T1N1 breast tumor tissues as the drive source. Accordingly, these marker genes can be used to diagnose indolent breast tumors or predict efficacy of breast cancer surgery. Specifically, indolent breast tumors can be detected or the success of breast cancer surgery can be predicted by examining a patient for over-expression of any of these marker genes, preferably marker genes 1180-1387, more preferably marker genes 1174-1179 and most preferably marker genes 1056-1173.

Other Embodiments

Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific embodiments of the invention described herein. Such equivalents are intended to be encompassed by the following claims.

All publications including journal references, patents and databases are expressly incorporated by reference.

What is claimed is:

Claims

1. A method of assessing whether a patient is afflicted with breast cancer, the method comprising comparing:

a) the level of expression of one or several breast cancer marker genes in a patient sample, and

b) the normal level of expression of one or several of said marker genes in a sample from a control subject not afflicted with breast cancer ,

wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1 and a significant difference between the level of expression of one or several of said marker genes in the patient sample and the normal level of one or several of said marker genes is an indication that the patient is afflicted with breast cancer.

2. The method of claim 1, wherein several of said breast cancer marker gene is selected from the group consisting of the genes listed in Table 1.

3. The method of claim 1, wherein at least of one of said marker genes encodes a secreted protein.

4. The method of claim 1, wherein the sample comprises cells obtained from the patient.

5. The method of claim 4, wherein the sample is a breast tissue sample.

6. The method of claim 5, wherein the cells are in a fluid selected from the group consisting of blood fluids, breast fluid, lymph fluid and urine.

7. The method of claim 1, wherein the level of expression of said marker genes in the samples is assessed by detecting the presence in the samples of a protein encoded by each of said marker gene or a polypeptide or protein fragment comprising said protein.

8. The method of claim 7, wherein the presence of said protein, polypeptide or protein fragment is detected using a reagent which specifically binds with said protein, polypeptide or protein fragment.

9. The method of claim 8, wherein the reagent is selected from the group consisting of an antibody, an antibody derivative, and an antibody fragment.

10. The method of claim 1, wherein the level of expression of said marker genes in the sample is assessed by detecting the presence in the sample of a transcribed polynucleotide encoded by each of said marker genes or a portion of said transcribed polynucleotide.

11. The method of claim 10, wherein the transcribed polynucleotide is an mRNA or hnRNA.

12. The method of claim 10, wherein the transcribed polynucleotide is a cDNA.

13. The method of claim 10, wherein the step of detecting further comprises amplifying the transcribed polynucleotide.

14. The method of claim 1, wherein the level of expression of said marker genes in the samples is assessed by detecting the presence in the samples of a transcribed polynucleotide which anneals with each of said marker genes or anneals with a portion of said transcribed polynucleotide, under stringent hybridization conditions.

15. The method of claim 1, wherein said significant difference comprises an at least two fold difference between the level of expression of one of said marker genes in the patient sample and the normal level of expression of the same marker gene in the sample from the control subject.

16. The method of claim 15, wherein said significant difference comprises an at least five fold difference between the level of expression of one of said marker genes in the patient sample and the normal level of expression of the same marker gene in the sample from the control subject

17. The method of claim 1, comprising comparing:

a) the level of expression in the patient sample of each of a plurality of marker genes independently selected from the genes listed in Table 1, and

b) the normal level of expression of each of the plurality of marker genes in the sample obtained from the control subject,

wherein the level of expression of at least one of the marker genes is significantly altered, relative to the corresponding normal level of expression of the marker genes, is an indication that the patient is afflicted with breast cancer.

18. The method of claim 17, wherein the level of expression of each of the marker genes is significantly altered, relative to the corresponding normal levels of expression of the marker genes, is an indication that the patient is afflicted with breast cancer.

19. The method of claim 18, wherein the plurality comprises at least three of the marker genes.

20. The method of claim 19, wherein the plurality comprises at least five of the marker genes.

21. A method for monitoring the progression of breast cancer in a patient, the method comprising:

a) detecting in a patient sample at a first point in time the expression of one or several breast cancer marker genes;

b) repeating step a) at a subsequent point in time; and

c) comparing the level of expression of said marker genes detected in steps a) and b), and therefrom monitoring the progression of breast cancer;

wherein at least of said marker gene is selected from the group consisting of the genes listed in Table 1.

22. The method of claim 20, wherein at least one of said marker gene encodes a secreted protein.

23. The method of claim 20, wherein the sample comprises cells obtained from the patient.

24. The method of claim 20, wherein the patient sample is a breast tissue sample.

25. The method of claim 20, wherein between the first point in time and the subsequent point in time, the patient has undergone surgery to remove breast tissue.

26. A method of assessing the efficacy of a test compound for inhibiting breast cancer in a patient, the method comprising comparing:

a) expression of one or several breast cancer marker gene in a first sample obtained from the patient and exposed to the test compound; and

b) expression of one or several of said marker genes in a second sample obtained from the patient, wherein the second sample is not exposed to the test compound,

wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1, and a significantly lower level of expression of one of said marker genes in the first sample, relative to the second sample, is an indication that the test compound is efficacious for inhibiting breast cancer in the patient.

27. The method of claim 26, wherein the first and second samples are portions of a single sample obtained from the patient.

28. The method of claim 26, wherein the first and second samples are portions of pooled samples obtained from the patient.

29. A method of assessing the efficacy of a therapy for inhibiting breast cancer in a patient, the method comprising comparing:

a) expression of one or several breast cancer marker genes in the first sample obtained from the patient prior to providing at least a portion of the therapy to the patient, and

b) expression of one or several of said marker genes in a second sample obtained from the patient following provision of the portion of the therapy,

wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1, and a significantly lower level of expression of one of said marker genes in the second sample, relative to the first sample, is an indication that the therapy is efficacious for inhibiting breast cancer in the patient.

30. A method of selecting a composition for inhibiting breast cancer in a patient, the method comprising:

a) obtaining a sample comprising cancer cells from the patient;

b) separately exposing aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of one or several breast cancer marker genes in each of the aliquots; and

d) selecting one of the test compositions which alters the level of expression of one or several of the marker genes in the aliquot containing that test composition, relative to other test compositions;

wherein at least one of said marker gene is selected from the group consisting of the genes listed in Table 1.

31. A method of inhibiting breast cancer in a patient, the method comprising:

a) obtaining a sample comprising cancer cells from the patient;

b) separately maintaining aliquots of the sample in the presence of a plurality of test compositions;

c) comparing expression of one or several breast cancer marker genes in each of the aliquots; and

d) administering to the patient at least one of the test compositions which alters the level of expression of one or several of said marker genes in the aliquot containing that test composition, relative to other test compositions,

wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1.

32. A kit for assessing whether a patient is afflicted with breast cancer, the kit comprising reagents for assessing expression of one or several breast cancer marker genes, wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1.

33. A kit for assessing the presence of breast cancer cells, the kit comprising a nucleic acid probe which specifically binds with a transcribed polynucleotide encoded by a marker gene selected from the group consisting of the marker genes listed in Table 1.

34. A kit for assessing the suitability of each of a plurality of compounds for inhibiting breast cancer in a patient, the kit comprising:

a) the plurality of compounds; and

b) a reagent for assessing expression of one or several breast cancer marker genes, wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1.

35. A method of making an isolated hybridoma which produces an antibody useful for assessing whether a patient is afflicted with breast cancer, the method comprising:

immunizing a mammal using a composition comprising a protein encoded by a gene listed in Table 1 or a polypeptide or protein fragment of said protein;

isolating splenocytes from the immunized mammal;

fusing the isolated splenocytes with an immortalized cell line to form hybridomas; and

screening individual hybridomas for production of an antibody which specifically binds with said protein, polypeptide or protein fragment to isolate the hybridoma.

36. An antibody produced by a hybridoma made by the method of claim 35.

37. A kit for assessing the presence of human breast cancer cells, the kit comprising an antibody, wherein the antibody specifically binds with a protein encoded by a gene listed in Table 1 or a polypeptide or protein fragment of said protein.

38. A method of assessing the breast cell carcinogenic potential of a test compound, the method comprising:

a) maintaining separate aliquots of breast cells in the presence and absence of the test compound; and

b) comparing expression of one or several breast cancer marker gene in each of the aliquots,

wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1, and a significantly altered level of expression of one or several marker genes in the aliquot maintained in the presence of the test compound, relative to the aliquot maintained in the absence of the test compound, is an indication that the test compound possesses human breast cell carcinogenic potential.

39. A kit for assessing the breast cell carcinogenic potential of a test compound, the kit comprising breast cells and a reagent for assessing expression of a gene listed in Table 1.

40. A method for determining whether breast cancer has metastasized in a patient, the method comprising comparing:

a) the level of expression of one or several breast cancer marker genes in a patient sample, and

b) the normal level or non-metastatic level of expression of one or several of said marker genes in a control sample

wherein at least one of said marker genes is selected from the group consisting of the genes listed in Table 1, and a significant difference between the level of expression of one or several of said marker genes in the patient sample and the normal level or non-metastatic level is an indication that the breast cancer has mestastasized.

41. The method of claim 40, wherein several of said marker genes are selected from the genes listed in Table 1.

42. The method of claim 40, wherein at least one of said marker genes encodes a secreted protein.

43. The method of claim 40, wherein the sample comprises cells obtained from the patient.

44. The method of claim 40, wherein the patient sample is a breast tissue sample.

45. A method for assessing the aggressiveness or indolence of breast cancer comprising comparing:

a) the level of expression of one or several breast cancer marker gene in a sample, and

b) the normal level of expression of one or several of said marker genes in a control sample,

wherein at least one of said marker genes is selected from the marker genes of Table 1, and a significant difference between the level of expression of one or several of

said marker gene in the sample and the normal level is an indication that the cancer is aggressive or indolent.

46. The method of claim 45, wherein several of said marker genes are selected from the group consisting of the marker genes listed in Table 1.

47. The method of claim 45, wherein at least one of said marker genes encodes a secreted protein.

48. The method of claim 45, wherein the sample comprises cells obtained from the patient.

49. The method of claim 45, wherein the patient sample is a breast tissue sample.

50. An isolated nucleic acid molecule comprising a nucleotide sequence of Table 1.

51. A vector which contains the nucleic acid molecule of claim 50.

52. A host cell which contains the nucleic acid molecule of claim 50.

53. An isolated polypeptide which is encoded by a nucleic acid molecule comprising a nucleotide sequence of Table 1.

54. An antibody which selectively binds to a polypeptide of claim 53.

55. A method for producing a polypeptide comprising culturing the host cell of claim 52 under conditions in which the nucleic acid molecule is expressed.

56. A method for detecting the presence of a polypeptide of claim 52 in a sample comprising:

a) contacting the sample with a compound which selectively binds to the polypeptide; and

b) determining whether the compound binds to the polypeptide in the sample to thereby detect the presence of a polypeptide of claim 53 in the sample.

57. A kit comprising a compound which selectively binds to the polypeptide of claim 53.

58. A method for detecting the presence of a nucleic acid molecule of claim 50 in a sample comprising:

a) contacting the sample with a nucleic acid probe or primer which selectively hybridizes to the nucleic acid molecule; and

b) determining whether the nucleic acid probe or primer binds to a nucleic acid molecule in the sample to thereby detect the presence of a nucleic acid molecule of claim 45 in the sample.

59. The method of claim 48, wherein the sample comprises mRNA molecules and is contacted with a nucleic acid probe.

60. The method of claim 48, wherein the sample is isolated from ovarian tissue.

61. The method of claim 48, wherein the sample is a tumor sample.

62. A kit comprising a compound which selectively hybridizes to a nucleic acid molecule of claim 50.

Table 1

Sequence 1 cMhvSF008a12
ACTATAGGGCGAATTGGAGNTNCCCGCGGTGGCGGCCGAGGTACCGGAGACAGGTGCAGTCCCTC
ACCTGTGAAGTGGATGCCCTTAAAGGAACCAATGAGTCCCTGGAACGCCAGATGCGTGAAATGGA
AGAGAACTTTGCCGTTGAAGCTGCTAACTACCAAGACACTATTGGCCGCCTGCAGGATGAGATTCA
GAATATGAAGGAGGAAATGGCTCGTCACCTTCGTGAATACCAAGACCTGCTCAATGTTAAGATGG
CCCTTGACATTGAGATTGCCACCTACAGGAAGCTGCTGGAAGGCGAGGAGAGCAGGATTTCTCTG
CCTCTTCCAAACTTTTCCTCCCTGAACCTGAGGGGAAACTAATCTGGATTCACTCCCTCTGGTTGAT
ACCCACTCAAAAAGGACACTTNTGATTAAGACGGTTGAAACTAGAGATGGACAGGTTATCAACNG
AAACTTNTCAGCATCACGATGACCTTGAATAAAAAATTGCACACACTCAGTGCAGCAATATATTAC
CAGCAAGGAATAAAAAGAAATCCATATCTTAAAGAAACAGCTTTCAAGTGCCTTTCTGCAGTTTTT
TCAGGAGCCGCAAGATAGATTTTGGAATAGGAAATAAGCTCTAGTTTNTTAACAACCCGACACTTC
TACAAGATTTANNAAAAAAGTTTACCAACAATAATCTAAGTTTACAGAAAAAATCTTGNGCTATA
AATACTTTTTAAAAAGGGATTTTGAATANCCATTAAAAACTGCCTTTTTTTTTTCCAGCAANGTNTT
CAACCAACTTTGGGTTCTGGTTTAATAAAATTTTTGGAAAAAA
Sequence 2 cMhvSF008c12
NGGCGAATTGGAGCTCCCCGCGGNGGCGGNCGAGGTACACAGTCAGTGTGGNTGNCTTGCACGAT
GATATGGAGAGCCAGCCCCTGATTGGAACCCAGTCCACAGCTATTCCTGCACCAACTGACCTGAA
GTTCACTCAGGTCACACCCACAAGCCTGAGCGCCCAGTGGCACCACCCAATGTTCAGCTCACTGGA
TATCGAGTGCGGGTGACCCCCAAGGAGAAGACCGGACCAATGAAAGAAATCAACCTTGCTCCTGA
CAGCTCATCCGTGGTTGTATCAGGACTTATGGTGGCCACCAAATATGAAGTGAGTGTCTATGCTCT
TAAGGACACTTTGACAAAGCAGACCAGCTNAAGGGAGTTGTCACCACTCTTGGAGAATGTCAGCC
CACCAAGAAAGGGCTCGTGTGACAAGATGCTTACTGGAGACCACCATCACCATTAGCTGGAGAAC
CAAGACTGAGACGATCACTGGCTTCCAAAGTTGATGCCGTTCCAANCCAATGGGCCNAGACTTCA
ATTCNANANAAACCATTAAGCCAGATGTCAGAAGCTTCCCCATTACANGTTTACAACCAGGCCCTT
GCTACAAAGAATCTACCCTGTCCCNNGGGCCGNTNTAGNAACTAGGGGGATNCCCCCNGGCCTGG
GAGGGAATTTNGATTTTNANCCTTNTTCGATTACCCGNCNANCCNTNTAGGGGGGGGGNCCCGGA
NCCCCACCTTTTNTTNCCTTTNTTGNNGGGNTNAATTTGGGGGGNTTNGGGNAAATAATGGGAATA
AANTNNTTCCNTGGNGNAAATTGNNTTCCCCTCCNATTNCNAAAAAANAAAAACCGGGGNAANAA
AAAGTANNNNGGGGGGGGCCNNANNGGCCCCCCCCCCCCCCCCCC
Sequence 3 cMhvSF008g12
CCCCGCGGTGGCGGCCCGAGGTACAACAAAGCAATGTTACCTTACCATAGGCCTTAATTCAAACTT
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TAGCTTATTGTAGACTTGTGCCTACTTTGTCATGAGGGTTTGACTTCTGCATTCTTCGTGGCTTTCCT
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GACTTTGTAACGCAGATGTCACTTCTCATGCCACCCTGCCCTGGTTAGCTCTTCTGGAGGAATACTG
CAGATAAGAAAAATAGTTATTTGGGAGGCTCCCTCAAGTGTGGTAGGAATTGAGACTAACACAAT
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CATTTTGCCAAGACACTGGAGGACTCTTTCATTATCTACTGGGAAAGAATAAGACTTAGAGGCTTT
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AGGAAAACCTGTTAAANGTTACATTTAATTTTGGAATTTCNCCNCNNTTGTCAACCTTACTTACAG
GNTNCAATGGCCAAATAAAAAGTTANAAAAAGTTTGGNAGAAATGCTTTCNANGTTTTTNAAAAG
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NTTTANNCTTTTTTTTCCCCCCCCCCCCCTGGGGGGGGGGCNCGGCNCCCCTTTTNTTCCCTTTTTG
GGGGGG
Sequence 4 cMhvSF010e04
CCGCGGTGGCGGCCGAGGTACTCCAGGCCGGGACTCAGGTTATCAAAAGTGCAGGAGCTCTGATC
AGCATGGACCACTTCTTCCAAAGAATTTCCCTGCTGGCCGTTTGTAGGGGTTGTGGTAATTCTATA
ACCAGTAATGTCTGGGGTGGTGCTCCTCTCCCAGGAGACTGTGAGCACTCCAGTGTCAGGGTTTGC
CTCCAGATGCAAGTTTGTTGGTGGAGACAATGGTGTCACCACTTTGTTTACAATTGGCGCATCTCTT
TCCTGTCCATCTCTCAGGACTTGGATGGTGTAGACGTATTCTACTCCTGGAGTCAAGCCGGACACA
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CCCTCGGNCCGNTTTTANAACTTAGTGGAATCCCCCGGGCTTGCAAGGAAATTCAATATCAAACCT
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Sequence 5 cMhvSF010f04

Table 1

TTAGGGCGAATTGGAGCTCCCCGTTGTGGCGGCCGAGGTACTGTGGATATTTAAAATATCACAGTA
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TGACTTTCCTACTTAAAATTTTGGTCATATCATTTCAAAACATTTGCATCTTGGTTGGCTGCATATG
CTTTCCTATTGATCCCAAACCAAATCTTAGAATCACTTCATTTAAAATACTGAGCGGTATTGAATAC
TTCGAAGCAGAACAGGCAATGTGCAGCCCTCATTTATGAGAAAACCCTCAGGAAACTCCCAGGGT
GATGCTTGGAGAAGCTGTGAGTTGAGCTGAAGCTGGAGAACTTTCCTCCAGANCCAAANGGCTTT
AAGAAAGGAAAGGAAGAACTCTTAACCTGGGTTCTGCTTAACATCACTCCAAGTTTAANAATGGG
ATCTTGGCCAGAAAAGACCATGCCTTTGTTCCTCTGGAATTGGNAAAAGAATGATTTACTCTCCGG
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ATTCCATATCAAACCTTATCNATACCCNNCNACCTCNANGNGGGNCCNGNTACCCANCTTTTNTT
Sequence 6 cMhvSF011c10
AATACGACTCACTATAGGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCCAGAAGTGT
CCTGGAATGGGGCCCATGAGATGGTTGTCTGAGAGAGAGCTTCTTGTCCTACATTCGGCGGGTATG
GTCTTGGCCTATGCCTTATGGGGGTGGCCCGTTGTGGGCGGTGTGGTCCGCCTAAAACCATGTTCC
TCAAAGATCATTTGTTGCCAACACTGGGTTGCTGACCAGAAGTGCCAGGAAGCTTAATACCATTTC
CAGTGTCATACCCAGGGTGGGTGACGAAAGGGGTCTTTTGAACTGTGGAAGGAACATCAAGATCT
CTGGTCCATGAAAATTGGGGTGTGGAAGGGTTACCAATTGGGGAAAGCTCGTCTGTCTTTTTCCTT
CCAATCAAGGGCTCCTCTTCTGATTATTCTTCAGGGCAATGACATAAATTGTATATTCGGTTCCCGG
TTCCAGGCCAGTAATAATAGCCTNTGTGACACCAANGGCGGGGCCCA
Sequence 7 cMhvSF013d01
CCTGCCGACGTACTTNTGAACAATTATCTCCTCCTGATCACTATTTCNTACTTNGCTTTAAAAANCC
AAAGTTCACAAAGAGAGGGGGAGNANNNGGGGGACTTTTATTCCAATANAAAANATGGANTAAG
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GTATGACTATAANTCTCTGTTATCNGATACGAGGNANAAACTGCAAGCTGACTAGCATGTTCTGAG
AATCAGCCATTCCTAAAAATTTTATAAACACNNGATACTNTANACNGGANAATGGGACCGCNCCC
AATAAACANATATTTGNGAAAAATGCATCCACA
Sequence 8 cMhvSF017c09
ACTCCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCCGAGGTACTCATCCCTACTGTTATAG
CTGGAGAGGATTTGGGTATTGAAGCAGGGAGGGGCAGATCCCACGAATNGACTGCAGATCTGGAA
TAATAAGTAAGGGGGTAGATCTGCCCATANAGCTCACTTTAACCGGCCTATACTCCTACAAGGAAT
TGGGGTAGGGATCTTCTACTCAGCCTTGCCACAATAGAATGGCCAATGCCCTTCTAGTATGTTTGG
TGAAGGTCTTGAAGGCCCATTTCCCCCATCCACCCTGGGGGAGAAATTGAGTCCCTAAAGTCAACG
ACAAGGCTTATTGAGGCTGAGTTTGCAACAGATCCCGATCTGGGAGGTAGAAACAAAAATGACTG
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AGCTAGCTTTCCAACCTACTCCACACTTGACTTCCCATANGACAACCAGTAAGTGTAANGGGCATT
TGCAAAATCAAGTGGAAAGTCCTTGGNCGCT
Sequence 9 cMhvSF021f05
CGAGGTACCGGAGACAGGTGCAGTCCCTCACCTGTGAAGTGGATGCCCTTAAAGGAACCAATGAG
TCCCTGGAACGCCAGATGCGTGAAATGGAAGAGAACTTTGCCGTTGAAGCTGCTAACTACCAAGA
CACTTTGGCCGCCTGCAGGATGAGATTCAGAATATGAAGGAGGAAATGGCTCGTCACCTTCGTGA
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GGAAGGCGAGGAGAGCAGGTAGGGAACTCAGACTTGGATGCGTGAACTAATGGTGACCATTTGTT
AGGCCCTGTGCCACTGGGCTCTAAGCAGTGTCACATTTAATCTTTAGAAAGTTTCTTTGAGGTAAC
TGCTTTCCACTTTTTGTAGAGGAGGAATTTGAATTGAGAGAGAGTAAGTGACTTGCTGAAAAAGGG
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TCATGCTCTGTGGAGAAAATGCTTGTAGTACATATTTTAAATGTACCTT
Sequence 10 cMhvSF027h12
GNTCNCNNNTGNCGNAANTNTATATAGCNCTNATCTNTNCGGNANCACNTNCANGGGGGNCCCCN
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GAAATCAACCTTGCTCCTGACAGCTCATCCGTGGTTGTATCAGGACTTATGGTGGCCACCAAATAT
AAANTGAGTGTCTATGCTCTTAAGGACAC
Sequence 11 cMhvSF031g09

Table 1

GGAGCTCCCCCGCGGTGGCGGCCGAGGTACTCAGAAGTGTCCTGGAATGGGGCCCATGAGATGGT
TGTCTGAGAGAGAGCTTCTTGTCCTACATTCGGCGGGTATGGTCTTGGCCTATGCCTTATGGGGGT
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GGTTGCTTGACCAGAAGTGCCAGGAAGCTGAATACCATTTNCAGNGTCATACCCAGNGTGGGTGA
CGAAAGGGGTCNTTTGAACTGTGGAAAGGAACATCCAAGATCTCTGGTCCATGAAGATTGGGGTG
TGGAANGGTTACCAGNTGGGGAAGCTCGTCTGTCTTTTTCCTTCCA
Sequence 12 cMhvSF031g12
CGACTCACTATAGGGGCGAATTGGGAGCTCCCCCGCGGTGGCGGCCCGAGGTACCTGTTCGCATTG
CAGAATATAAAACTTGGTTTACACTCTATAAAAAATAACCAATATCCAAATTCAAGAGAGCTAGC
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AAATTATCACTGGTNTTCTTAATAGTNAAAATGGGGGAACCCAGANGGCAGGAAATTTNCATTCC
CTATATTTGGGGCTAAACCTAAAAGAGTATATCCCTTTCAAAGAGCTTAAGTGCCT
Sequence 13 cMhvSF031g12
TGANGGAATTCGATATCAAAGCTTATCGGTTNCCGGCCACCTCNAGGGGGGG
Sequence 14 cMhvSF033g12
CGCGGTGGCGGCCGAGGTACCGGAGACAGGTGCAGTCCCTCACCTGNGAAGTGGNTGCCCTTNNA
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GGTAACTACCAAGACACTATTGGCCNGCCTGCAGGANGAGATTCANAATATGAAGGAGGAAATGG
CNCGTAANNTTTGAGNATACCNANACCTGNTTAANGGTTANANNNCCCTTGACATTGNCAATGCC
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CTTTTGATTAAGACGGNTGAAACTAGAAGATGGACAGGGTTATCAACGAAACTTCTCAACATCAC
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TTAATAAAAAAAGTTTCAACCTTAATCTTAGTTTAACAGAAAAAATCTTGGNGCTTANAATACTTT
TTAAAAAGGNATTTTTGGAATCTTATTAAAAACTGGTTTTTTTTTT
Sequence 15 cMhvSF053c06
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TTTAAGGAGGCGCTGATCATGCTGAGAGTATCAATCAGAAAAATGCATTTATTCACAGGTGCCAGC
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Sequence 16 cMhvSF053d08
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ACCCAGANGGCAGGAAATTTCCATTACCCTATATTGGGGCTAAACTTAAAAAGAGTATATCCACTA
TCAAGAGCTTAGTCCTCGGCCGCTCTAGAACTAAGTGGATCCCCCG
Sequence 17 cMhvSF062b03
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AACCAAATCTTAGAATCACTTCATTTAAAATACTGAGCGGTATTGAATACTTCGAAAGCAGAACAG
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Sequence 18 cMhvSF063h08

Table 1

TCCCCGCGGTGGCGGCCGAGGTACAGTCCTGATTGCATCATAATTGTGGTTTCCAACCCAGTGGAC
ATTCTTACGTATGTTACCTGNAAACTAANTGGATTACCCAAACACCGCGTGATTGGAAGNGGATGT
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TNACATGGATGNANTATGGCTNAACCCAACCTANNGATNACTCNTGCTTTGACCCCTACACGAATG
TCTGAATCAGGCTTTAAACTGTTGTGCCAGTGCTTAGGCTTTG
Sequence 19 cMhvSF073c02
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACACAGTCAATGTGGTTGCCTTGCACGAT
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GTT
Sequence 20 cMhvSF087d03
TTAGGGCGAATTGGAGCTCACCGCGGTGGCGGCCGAGGTACGTCACGCAGGGCAGCACGTGAGGT
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TNNGNCAGGNNGNNNNGCTCNANCTCNNCNCGGGCTNTGNCGANTGGTTAGNTGGTCCACCTGCC
CGGGCGGNCGCTNGACTCTAGAACTAG
Sequence 21 cMhvSF092d08
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TGCACANTGNANTGACAATNCNNGCNNCTGNNCTGANNTTNTTNANGANTCNNCTGGNATNGATN
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Sequence 22 cMhvSF100f07
GCGGNGGCGGCCGAGGNCCATTTNTACGGGGAGACAAAACCCNAANCCCGNGANACCCANGCAA
NNACGACGAANCGCTGNTTACNGNNAACGGGAAGNAACCGCCCNCNANAAAAAAGACAAAGAAC
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ACAGAAAACGACGGCGNCAAAAGNAAGNNGCCCAGGGNANANGANAANGGAAGGAAGGAANGG
CCGCCCAGNANNAGGGCCCAAGGNCCAAGAGGACGGGACANCGGGCAGCGAGG
Sequence 23 cMhvSF110a12
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ATANCTATTNAAAACTGGTTTTTTTTTTTTTCCAAGCAAGTNTTCCAACCCAACTTGGGTTCTGGCT
TAAAAAAAANTTTTGGGAAAAAAAAAAAAAAAAA
Sequence 24 cMhvSF112h10
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CACTATTGGCCGCCTGCAGGATGAGATTCATAATATGAAGGAGGAAATGGCTCGTCACCTTCGTGA
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TAATCTGGATTCACTCCCTCTGGTTGATACCCACTCAAAAAGGACACTTCTGATTAAGACGGTTGA
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ACACACTCAGTGCAGCAATATATTACCANCAAGAATAAAAAAGAAATCCATATCTTAAAAGAAAC

Table 1

AGCTTTCAAGTGCCTTTTCTGCAGTTTTTTCAAGGAGCCGCAAGATANGATTTTGGAATAGGAATA
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ACCATTAATCTTANGTTTTACANGAAAAAATCTTNGNGCTNAGAATTCTTTTTTAAAAAGGGTATT
TTTGGAATNCTNTTTAAAAAACCTGNTTTTTTTTTTTTCCNGCAAGGTNTTCCAACCCAACTTTGG
GTTTTTGCTTTCAAANAAAAAAAAAAAA
Sequence 25 cMhvSF113c04
AGGTACTGTGGATATTTAAAATATCACAGTAACAAGATCATGCTTGTTCCTACAGTATTGCGGGCC
AGACACTTAAGTGAAAGCAGAAGTGTTTGGGTGACTTTCCTACTTAAAATTTTGGTCATATCATTT
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TGGGAAAAGAATGAATTTACTCTTCCGGGAAATNTTTCTTTTGGTCAACCCTGGTACCTTCGGGCC
CGCTTNTTNNAAACCTAAGTGGGANTCCCCCCCCGGGCTGGCCAGGGGAATTTCCAATTATCCAAA
GCCTTTTATTCGATTACCCCGCCGAACCNTCCAANGGGGGGGGGCC
Sequence 26 cMhvSF115b02
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Sequence 27 cMhvSF115c02
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GGNCCCCTTTTTTTTTTTTTTT
Sequence 28 cMhvSF115g01
AGGTACAGGCTGACAGAGAAGATTCCCGAGAGTAAATCATCTTTCCAATCCAGAGGAACAAGCAT
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NNTNTTNNNNNCNNNNNGNNGNNGGGGGGGGGGG
Sequence 29 cMhvSF117f12
AGGTACTTGGAAATGTGAGATGGCTGTGGTGCATTCCACTGGATGGGGTGGGAGTTGGGCTGACT
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ATGCCACTCCCCAATGCCACGGCCATAGCAGTAGCACCGGTATCTGACACCATGCACATACTTCTC
CCATGAATCTCCAATTTGATAAAACGTCCCAGTCTCTGAATCCTGGCATTGGTCGACGGGATCACA
CTTCCACCTGCCCCGACCCTGACCGAAGCATGTACCTCGGCCGCTCTA
Sequence 30 cMhvSF117f12

Table 1

CCTGTGTGAAAATTGTTTATCCCGCTCACAATTTCCACAACAANATTACGAGCCCGGGGAAGCCAT
AAAAGTTGTAAAAGCCCTGGGGGTGCCNTAAATTGAAGTGGAGCTAACCTCACANTTAAATTTGC
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CTGCAANTTAATTGAAATNNGGCCCAAACGCCCCGGGGGNAGAGGCGGGTTTGGGGTATTGGGGG
GGGTTTTNTCGGTT
Sequence 31 cMhvSF024d10
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NNNCANGNANGNANAAAGGNNNTTTGCNNNGNTTNNNANANNGCGATNAANATANGNCCCCNCAT
CATTAAGCCNTNTNAGAANGGGGNNCATNAAAAGNNANGGGGGATTTTNTNTGGNGGGCCNCCC
NAAANNAANTTNAAGNNGGNGANTTNAAAAAANTTNTGANACANCCNGGAGACTGGACNTTNTT
NNANCCNGNCNNTGNTGCTTTTAAGGGATTTACTANCNAAGAAAAANANNCCCTGNTTCGGGACA
AAAAAATGCTCTTTTTAACATTCA
Sequence 32 cMhvSF024e05
NATGGAATCCTGTTGGCNCATGATNAANTAACCCTTACNGTTCAGGGTTCCTGGAACTTNTACCNG
GGCCACTCTGACGGGCCTNACCACAGGTGCCCCCTACNACATCATANGTGGANGCNCTGAANAGA
CCANCTGAAGGCANTANTGGTTCGGGAACNAGGNGTGTTACCGNTGGGCAACTCTGGCTTGAACC
AACCTACGGATGACTCGGGCTTTG
Sequence 33 cMhvSF055a10
GAATNGGAGCTCCACGCGCGGTGGCGGCCGAGGTACACAGTCAGTGTGGTTTGCCTTGCACGAT
GATATGGAGAGCCAGCCCCTGATTGGAACCCAGTCCACAGCTATTCCTGCACCAACTGACCTGAA
GTTCACTCAGGTCACACCCACAAGCCTGAGCGCCCAGTGGACACCACCCAATGTTCAGCTCACTGG
ATATCGAGTGCGGGTGACCCCCAAGGAGAAGACCGGACCAATGAAAGAAATCAACCTTGCTCCTG
ACAGCTCATCNCGTGGTTGTATCANGACTTATGGTGGGCCACCAAATATGAAGTGAGTGTCTATGC
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CCACCCAAGAAAGGCTTGNGTNACAGATGCTCTTGAGAACCACNATCNCCATTNNCTTGGAGAAN
CAAGGACTGGNACNATTNATTGGCTTTCCAAGGTGGTTCCCGTTCCAGGCCATGGGCCCGACTTCC
AATTCCGGNGAACCCNTTTAGGCCNGAATGNTGGGAAGCTTCACCATTACAGGGTTTACCANCCA
GGCCTNTGACTTACAAGATTTACCTGTACCTTGGGCCGGTNTTANAANTTGNGGGATCCCCCGGGC
CTGCAGGGAATTNTTNTCAAGNNTTTTNGTTACNGTNNACCTTTAAGGG
Sequence 34 cMhvSF055e04
TCGACTACTATAGGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACATTTGTTTATTTAAA
GCACAGGAAATGAATAAAATGCCACCTAAAAAGTATCTGCAATGAATAAATTATTTCCAGTGAAG
CACTGCAGATCCACACACACCAGTCTGCTAACCTTTACCAAGGCCATGTCCGGTGGGCTTGTGCTT
GTCCCAGTTGACTCTTCCTTGAGACCTTTCCCTTCTGTGCAATGACCACAGCATTAGAGACCAGTCC
TGCATGCGCTGGCCTTCCTCGTAGGCATGGCAGACCACGTGGATGAGCAGTGGGCTGGCATGCAG
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GGGCTTTAAAGAAAAGAGCCAGGGTTCCTCAGGCTGGGCCCCTTCACTGAGGCACAGCTCCAGGA
AATACTGGTCTCAGGAGCCAGCAACTTGTCCAGGAGTTTTGAGCCCTCAGTTGAAGGAAAATGGC
CACGTGGGTGTCCTTGCAGGCAACAGTGATGTCGGTGATGGTGACAAGTANCCAGCCTAAGGAAG
GCCAATCCCACCTTGGGTGGGAATGCAAGGGCACCTAGTCCTGCTTGGAANGGGCTNGGAAGGTT
GGGGA

Sequence 35 cMhvSF094a10
CGGCCGAGGTACGGAGCAATCGANGAGGCATAACCACACNNGGGGTGGCTATAGGGCTGGAAAA
CGCTGAAGATGACTGCTGACACNGAGGCCAAGGATNGNAATACAGCCAGCTTGGNAAAGACATN
AAAGCAGGAGNCNCTACAAGCGAGCNGCNGCACTAAGAAACACCCAACACCNCCANGNGCCTGG
ACAGGAGGCCCCCAGCAGAAACATGCACGCATAAGCTTCAAGCNCACTCCCTAGGATGGATGANA
GANGGGCNCCCAANNAANGGANGCCCACCAGGACCCACCAGNCAGGGCCCCANG
Sequence 36 cMhvSF100c07
TCCCCGCGGTGGCGGCCGAGGACCCTGTTTTANCGGANACANCAAACCCACACGAGCATGCGCGC
TCCNACANGANAGNGGGCCNAACACTAANCTGAAAGCANAAGTGCGCGGGCCGACTGACCNACN
CAANAAGAAGNTCANANANNACNACANCNTTGGCATCATGGTGGGCGGCAAAGGCTTTNCTANCC
GANNCCAAACCNGNTGTGAAAAACNCTTCATGACAAAAGACGTGAGCCGGGGTCGANANCCTGN
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Table 1

AGATGCGCCGNNNAANCTGGGAGCAGAGCAGNAGCNGGCAAACGCCCNNCAGAGCAAAGGGCTT
AAGAAAGAAA
Sequence 37 cMhvSF100f12
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ATAGCTTGTCAGCTTTACAAAGCGGGCCTACGCCATTCTNATCAAGAAGAATGGTTGNCACAGTAT
TNGNGAACTGCACCNCAGGTGGAGTGCTAACA
Sequence 38 cMhvSF100f12
CACACCATCTTTGTCTAGAATACCCTTGGGGGTGGGATCTAGCACCTGGGATTTGCTGCTGAGNTT
ATCTTTGGGAGG
Sequence 39 cMhvSF113e08
CGCGGTGGCGGCCGAGGTACTATGANCCNAACACCAANNGCTNCNCTGNATTGTGNGNTGGAGGT
TGAGNTGGNAACNANANCNAANTCGGATCACATAAAGAATGTANAAAAGGTTTGCCGCTCCTGTG
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TTTGAACAATAANGANTCCCACATCGTCANCTTNTCTATGGTGAANCTCCGGGTGTANATTCCCTN
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CCTATNCCTNTGGGGCNAATGTGTGTGTGGACNCTCTCTCTCTGACTCCANNCNTNTTNTGGACAA
TTCTNNNAATGANGGGGTAANACTTAACCACTNCNGGTNNTNATCTAAACATTTCTATNTAACCAA
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CAAAATGGATATGGCTAACTAAANATNCTTTCAAGGTTGNGTTTCNTTTTTTT
Sequence 40 cMhvSF115f01
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NNGNTNCNATNNNAATANNNANCNANACTGAAGNGAAGTAAAGCATCACCCANCNCACTAGTCC
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NGNNCCCCNCTTTTCCCCNNNGGAAGCGCCNTAANGAGGGGCCNNGGGGNGGTTTTTNAANNAN
AGGGCCCCCCCNCTNCCGGGGGGGGGGTGANAAAAAANAAANANTAAACCCCCCCCCCCCCCG
GGGGGGGGNTTTAATNNAAAAAAAAACNCCCCCC
Sequence 41 cMhvSF023f04
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Sequence 42 cMhvSF024a08
GCTCCCCGCGGTGGCGGCCGAGGTACAAGCTGTTTTTTTTTTTTT
Sequence 43 cMhvSF087a01
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GTTCTGAGNCTATTATGGGAGGANCNNCCTTTGAG
Sequence 44 cMhvSF090b01
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TTTTTTTTTTT
Sequence 45 cMhvSF093b01
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Sequence 46 cMhvSF093e03
CTCCACCGCGGTGGCGGCCGAGGTACAAG
Sequence 47 cMhvSF100d07
GGCGAATTGGAGCTCCCCGCGGTGGC
Sequence 48 cMhvSF108g05
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Sequence 49 cMhvSE006c08a2
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Table 1

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Sequence 50 cMhvSE043b11a3
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CNCGCCTNGGGGAGAGTTGTGCCTACNGGAAGAGNNGGCATAGAGGCACATTGTGGGGNCGTTTG
CCCGTCTGGCACA
Sequence 51 cMhvSE043f10a3
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ACCAAAGGCCCAAGTTTTATTCCCTTGTTGGGGNTAAAACTTTTTTTCTTGGAACAACCCTTTTCTT
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ANTTTTCCCAAATTNTTTCCAAAAAGNCCTTTTANTTCCGGAATTANCCCCGGTTCGGAAAANCCN
TTCTNAAANGGGGGGGGGGGGGN
Sequence 52 cMhvSE043c09a3
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Sequence 53 cMhvSE043b09a3
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Sequence 54 cMhvSE043c08a3
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Table 1

GCCCCCAANGGGTTTCCTTGGCCAAAAAAAAACCGTTNGCCTTGGAAGAAAATTTTCCTTAAGTNG
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CCCGGTNCCGAAACCCCTTCNNAAAGGGGGGGGGGGGGGGGC
Sequence 55 cMhvSE043c07a3
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Sequence 56 cMhvSE043h02a3
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Sequence 57 cMhvSE043h01a3
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Sequence 58 cMhvSE043h09a3
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TTCAAATTTGGGGGGTTNCCAATTTAAAGGGCCTTTGGG
Sequence 59 cMhvSE010e07a3
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GGGGACAAGGGAAAGAATCACCTTACCAACCAAATTTGTTCTGGCCTCCCAAGGGTCCTTCTTGAN
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Table 1

GAAGGGATGGGGAAAGGGAAAGGGGACCCTTTACCCCCCCGGGCTCTTCTCCTTGACCCTACCCA
ATTAAAAAAA
Sequence 60 cMhvSE052c02a3
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GGAAACTGAATCTAGGCAACGGGTGATTTGTGTAGCTTACAACCTGAACAGCAAGATGTTCCAA
Sequence 61 cMhvSE035d05a3
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CAACATGGGTGGCTGGACATTAGATAAACATCGCGTGCTGGATGTACCTCGGCCGCTCTAGAACTA
GTGGA
Sequence 62 cMhvSE006g05a2
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Sequence 63 cMhvSE001e03a3
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TACCT
Sequence 64 cMhvSE035c06a3
CGAGGTCGCAGCAGCTGGGGAGGAGCCAAAGCCTCGGCGCTCACCTAAGCCGCAGGGAGATACA
CCCAACTGGGAGATGAGGAAACAGCAACCCAGAGAGGAGAACTAACCCACACAGGATCATTTCGT
GAAGGAGCAAGGCTGAAGAACCAGACCTGGACTTTCTTAGGACAAACTTACTGCAGCTTGAAGGA
GCCAACCATGGATTTGAGGCGTGTGAAGGAATATTTCTCCTGGCTCTACTATCAATACCAAATCAT
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GCTATGGTGGGTATACACTGCCTATGTCTTTATTCCAATCCACATTCCCTGGCTTGGGAATTTTTCT
CAAAAATA
Sequence 65 cMhvSE044f03a3
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AATCCACATTCGCCTGGCTTGGGAATTTTTCTCAAAAA
Sequence 66 cMhvSE001c02a3
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Sequence 67 cMhvSE001f04a3

Table 1

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CACACNTNTGGAGGGCTGGTTNTTCTGNACNCCCNCCCGCAAGCTGATATGGCTGGTGCTGCAGCC
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Sequence 68 cMhvSE001f04a3
ACGTACCNANCTTTTGTTNCCTTAAGNGAGGGTTAATNGCGCNCTTGGNGTAATCATGGNNANAN
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Sequence 69 cMhvSE041c01a1
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Sequence 70 cMhvSE035e02a3
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GGAGACTCAAATGGGTCGCTGGGGTCAGCTTTCTGCAGTTCTGGAGGGATCGGGATCCGCTTGTAG
TACCT
Sequence 71 cMhvSE043b06a3
TGGGGCNGGGCCCGAAAGGTACCTTATTGTGGAACTTTTCATTTGGATTGCCCCCCAGGGAACACC
AAGAAGAACTTTTTTCCAAAAAAACATTGGAATTACCAGGGGGGAACATTCTTCAANGGCTTGGA
ACTGGTGGCTGGTCCTGGAATTGGTTGGCTTGCCTTGGGTGGTTTGGGGTGGAAAATTTGGAAAAA
GCCTTGGGTTATTCTTCCAAAGAAAATTGGGGGCCAAGAACCCCCGNAAGAAAGCCATGCCCCTTT
CTTGGGCCTTTAACACAACTGGGGGTGGTGGAAAAACCAAACCTAAATTTGGTCCGGGTGGTTTTA
AACCAAAAAAAATTGGGGAATTTTCCCACCTTGGAAGGCCCGCCCCCTTACCAAGCCCAGGGAAAA
GAAAGAAATATTTGNAAGGGGAAAAATTTGGGTTTAAAAGGGGAAAAGTTCCAAGGCCACCTTTT
TACCAATTTTTAAAAGAAAAAAAAAATTTNGGGCNTTTACCCAAAACCCCCCCCGGAACCCACCNA
AGTTTAAGCCCAATTTTTTTGGTTGGNCCCCAAAAAATTTTTTCCTTNGGGGTTTTGGGGGAAAATTG
GGGGGTTGGNAACCCAAAACCAATTGGNCCTTGGGGGAAAANCCCCAAAANGGGGCCAATTTGG
GTTTTAAANAAAACCCCTTTGGCCCCCCCGGGGGGGGCCCGGGGGNCCCCGGCNTTTTCTTTTAAA
NAAAAACCCTTAAAGGGTTGGGGGGAAATTCCCCCCCCCCCCGGGGGGNCCTTTTGGCCNAAGGG
GGAAAAAATTTTTNCCCNAAATTTANTTTCCNAAAAAGNCCNTTTTAATTTCCGGNAATTTANCCC
CCCGGTTTCCGGNAAACCCCCTTTCCNAAAANGGGGGGGGGGGGGGGGGCCCCC
Sequence 72 cMhvSE043h03a3
AGGGTGGCAAAAAAAAAAAGGGCCGTTTTGCCNTCAACAAATTGGTANCCCGAGAANTACNCCNT
CAACATTCACAAGCGCTTCCATGGAGTGGGCTTCAAGAAACCGTGCACCTCGGGCACCTCAAAGA
GATTCGGAAATTTGCCATGAAGGAGATGGGAACTCCAGATGTGCGCATTGACACCAGGCTTCAAC
AAAGCTTGTCTGGGGCCAAAGGAAATAAGGGAATGTGCCATTACCGAATCCCGTGTGCCGGCTGT
CCAGAAAACGTAATGAGGGATGAAAGATTCACCCAAATAAGCTATATTACTTTTGGTTACCTTATG
NTACCTTCGGCCCGCTCTAGAAACTTAGGTGGGATCCCCCGGGCCTGCAGGGAAATTCCGATATTC
AAGGCTTATCGATACCGTCGACCTTCNAGGGGGGGGGCCCCGGTAC
Sequence 73 cMhvSE045g08a3
GGCNNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCATTTGTGGTGCCCAAGTTTAAGTTATCT
TACATTCAACCCAGGACACAAGAAACTCCTTCACATCTGGAAGAACTTGAAGGATCTGCCAGAGC
ATCTTTTGGAGATCGAAAGGTAGAACTTTCCAGTTCATCCCAGCACGAACCTAGCTATGATGTGTA
TAACCCATTCTATATGTATCAGCACATTTCACCTGATTTGAGTCGACGCTTTCCTCCCCGTTCAGAA
GTGACGAGACTGTATGGATCGGTTTGTGATTTAAGGACGAACAAACTTCCCGGTTCCCCTGGGCTA
AGCAAATCTATGTTTGATCTTACAAACTCATCTCAGCGATTCATCCAGAGACATGATTCATTGTCC
AGTGTACCT
Sequence 74 cMhvSE030f02a3

Table 1

AGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCACCAGAGGACACGGATAATCTTCAT
ATCTGATTCTCCTGCGGTGCGTGTGCCCTGACAGAAGAAGTTGTATTTGCCTTCCCATACTCCTGTT
ACTAACTCACAGAACATATACAGAGACAGCAGTGTGAGTCCAAGGTTATACACCACTAAAATCCC
CCGGCAAGAGAATGGCTGTTTATTCCTCATGTATTTTGGTCCCAGCCATACAATTAGTAAATATAT
GACAGAGCAGATAAATGTGGGTATATAATTGTCCAGAAGAAACCATCCTTTTACTCTAGTATCTCG
AGGGCCTAGCAATGCCTTGAAATAGGTACCT
Sequence 75 cMhvSE033d07a1
AGGTGTCGCCGCCGCGAAGGGAGCCGCCGCCATGTCTGCGCATCTGCAATGGATGGTCGTGCGGA
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GCCCGCAATTCCTTCCGCTACAACGGACTGATTCACCGCAAGACTGTGGGCGTGGAGCCGGCAGC
CGACGGCAAAGGTGTCGTGGTGGTCATTAAGCGGAGATCCGGTGAGTTTTGTCTGGTTTGGGCCAG
AGAGCGGCCCCTTTCCCGGGTCTGGGAAGCTGTGATTTTTTACTGTCAGGCAGGGAAGAGACGGTA
ACTGCCATCGCGGCGGGCCATCCCTGGGCGCCAGGGGTGTTTGGTCTGGGGTTACCTGCCCGGG
Sequence 76 cMhvSE043g02a3
GCGGCCGAGGTACTGNNAGGGNNAAAANNAGCTGNNNGGNNGNCANAAGTGCNTCTNCTTAAGG
ACCNNNNCCTGCTGGNATANAGNACNNAAACCTANNACCNTGGANTGNNGANTANCNTNANNGG
ANTACGGNCAAANGNNGGCCTGCGGCTGCTGAACTACCATTACTTCACTGGTGTCAGATGGGGAG
ACGNNGGCACGTAATGGGCATANNCNTCCTTNNNGGCNAATCTGCAAGCGTGGAAGGCANCNTGT
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NAAGAAACCNACCCACTGTGATCAATATTGGAGANAAANTGNACATTCTTGGGCTGAANACNGGC
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Sequence 77 cMhvSE030b01a3
NAATTGGAGCTCCCCGCGGTGGCGGCCGATGTACATNTNTCNGNNANGGNCNGNTGNAGNAANAC
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GGGTAACAGATGCCCTGTCCACTGAGAGCGGCAGTTCTGCAGTCAGAGTTCTTTGATCAGCCCTGG
ACCCATTTATCACATGGGGGAGGAA
Sequence 78 cMhvSE040a01a3
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AAAAAAAAAAAAAAAAANNCCCCCCCCNAAAAAAAAAAAAAAAAAAAAAANNNNCNACNCCCCC
CNNNGGGGGGGGGGGGGNNCCNNNNCNNNNNTTTNAAAAAAAAAAAAAAAAAAAANACCCCCN
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AAAAAAAAAAAANANNAAAAAAAANANANAANAAAANAAAANAAANNAAAAAAAAAAAANANAA
NAAAAAAAAAAAAAAAAANNAAAAAAAAANANAANAANNAAAAAAAANAAANAAAAAAAAAANA
AAAAANAAAAAAAAAAAAANNNAAAANAANNAAAAAANNAANAAAANANAANAANNANNANAA
ANNAAANNAAAANANAAAAAAAAAAAAAAANNAAAAAAAAAAAAAAAAAN
Sequence 79 cMhvSE006a10a2
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GAGGTAACTAAATCGATAGGAAGCTGAGGGAAGATCATTCCATTATGGACTTTCTTGTTTGGGTGC
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TCTC
Sequence 80 cMhvSE045d10a3
GATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTGCTGGTCTCAAATTTCCACAAGGAGATATCA
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TTTCCCATCTCAGCAGCCTCCTTCTCAAATTTTTCAATGGTTCTTTTGTCGATGCCACCGCATTTATA
GATCAGATGGCCAGTAGTGGTGGACTTGCCCGAATCTACGTGTCCAATGACGACAATGTTGATATG
AGTCTTTTCCTTTCCCATTTTGGCTTTTAGGGGTAGTTTTCACGACACCTGTGTTCTGGCGGCACCT
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Table 1

CAGTGACATTGAATGTGACACTGAGAATGAGGAGCAGGAAGAGCATACCAGTGTGGGCGGGTTTC
ACGAC
Sequence 81 cMhvSE011g01a3
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CTGATGATGTGTTGTTGCCATGGTAATCCTGCTCACTACCTCTN
Sequence 82 cMhvSE011g01a3
TGCTGTTTCCTGAACTATACCAGTGGNGGAACACTTGAACAAANTGNNTACCT
Sequence 83 cMhvSE045h07a3
GCNAATTGGAGCTCCCCGCGGTGGCGGCCGATGTANAACTAGNGNATANNCCGGNCTGTATGAAT
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NNCNNAAGGAANANTGAACNCTAAGGAATACATCATGGTAAGATTCTNTCCTACTGTGTCAGCGA
GCGCTGCTGCCGGTCTANATTGCCATGTCCCAACAACAGCAAAGCCACCCTCCCTCCTGCTTCTTC
CAGGATTGCTCTTTAAAGGGACCAGAGTGACATACTGATGCCTACTGAGGCATCTGAGATGCACTG
TGTTGGAGGTTAGCCTCAATGCCAGCCTCTGGTTGTCTAGGTGAGTGACATCACCATAAAATCACA
TTGTGTACCT
Sequence 84 cMhvSE023d03a1
CTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGCACGGTTGGCATGGCCTTT
CCAAAGGTCTTCCACTAGAGTCTAGAGAAANCTAAATATAGTCATCCACAAACTGGA
Sequence 85 cMhvSE011b04a3
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CNTTNAAAAAANGGGGACCCCCCCNNCCNGGGNAATTTNANTNNANCNTTTTNAAACCCCGNNCC
CCCGGGGGGG
Sequence 86 cMhvSE032e09
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GGACGACCNGATNGGGNAAAAGCCAANNCANACANGCGTGAANGGCCAGGTACCGGNAAAGTAG
GCACAAGGGNAGCNTCTGCTCAGTGTCGCTACANGGGGGATCTCTCAAGGACTTNACAAACGNGG
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CCTACACCTTCNCCCCAATGNTTCNCTTTTCTTNCTTGGTANTCCCNTNNCTNTNCCNAAACTTGGG
CCCAATTTTTAATTTTTAATTTTTTAAACCT
Sequence 87 cMhvSE043f05
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TGCACCTTGAAGTTCAAAAGCTGGCACAGACCCGGGCAGAGGGACAAGCCGCCAGGCCCAGGAGT
ATGAGGCCCTGCTGAACATCAAGGTCAAGCTGGAGGCTGAGATCGCCACCTTCCGCCCGCCCTGCT
GGAAAGATGGCGAGGACTTTAATCTTGGTGATGCCCTTGGACAAGCAAGCAACTCCATTGCCAAA
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TTCTAAAAACTAGTGGGATCCCCCCGGGCTTGCCANGGAATTTCGATATCAAAGCCTTATCGAATA
CCCGTCCGACCCTCNAAGGGGGGGGGCCCCGGTACCCCAACTTTTTTG
Sequence 88 cMhvSE001a09
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TGNTAANNCACTNTTATCGGANACCTGAGCNNTTTTAGGACGGGCCCGAGACAAGCTTTTGTTACC
TTACTGANGANGTGNTGGNGCCCTGGGNATANTGNTNAGTACCTGCCCGGGC
Sequence 89 cMhvSE001d12
NCNNGGCNNGTACACGGGAAACNATTNATTCNNGNCTNANGGGGANTTNCCTTANCGGATACTAN
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CCNCNANTAGTTNCCTGCTTAAGCAAATAGAATTTCTTANGGGGCAGATNCCAAAANCACCGATN
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Table 1

AACGNCGCTCTAAAANTAGTGAATCCCCCNGGCTGCAATGAATTCGATATNAAGCTTATCAATACC
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Sequence 90 cMhvSE001e12
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CGNTAAANCNCACCAAGGNGTGAAGGCGATANTGCAGGAACTGCAATGGACCCCTGGNTGGAAC
CCTATCATAGGGACAAGGATGGCTTCCTGGAACTCCGAGNGGANGGANGACTGCTNNNTNANNC
NAGCACANNCANGATGAAGANNTNTTNATTCTTTAAGANCCTNGNNATTGAACTTNACACTGATC
TGTACCTCNCC
Sequence 91 cMhvSE001h10
GATTGGAGCTCCCCGCGGTGGCGGCCCGNCNNGCCANGTACATAAGCNAATATGCCCATTGGGGN
CCTGGGCACTANNNNGTCTNTTTTNGGCANAANNAATGANNCTGTGAACGTGGCCCNTGATGCCT
AATATCCCACAACNACTGTGCCTAT
Sequence 92 cMhvSE007f03
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CNCNANNTANTGANAANANTCTTTNTNTNCACCNTNANNNTTANGNTNNTCANNNNCTNTCAAGA
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CTATATAACTNNCCACATGACTGNTANNNNACTTCAATCGTTCAAGAATTATATGANCCTATGACC
NCAATNAATNCCATGTACNTCTNANGCNTNNCAACTACNNGANCGNNNGGCCTGNAANAANTCTA
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Sequence 93 cMhvSE010c02
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Sequence 94 cMhvSE011f07
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NGCNNNTNCCNGTCNANAANTTNTGGATCNNNCGGGNTGNNNGANTNCGCTCTTGGCCTNATCAN
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Sequence 95 cMhvSE015e06
AGGTCTAATCTACAAGCGTGGTTATGGCAAAATCAATAAGAAGCGAATTGCTTTGACAGATAACG
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TATTTTTNNTTTTCNTTAAAAGNNCCTNGGGGGTNTTGGGGTTTTAAAANTNAAAAAACCCANGG
Sequence 96 cMhvSE016b08
GCTCATCAACACCTCTGACTTTGAGTTTTTTCGTGAAGGTGGGAATGTTTAGCTCGGGAGAGTTGA
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TAAGAAGAAAACACTTTGTGGGCCAGGTTAGTAGGAGTTTTTATCCTTCCTTATATTTTTTCTATGC
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CGCCTCTAGAACTAGTGGAT
Sequence 97 cMhvSE017e06

Table 1

AGGTACNTATCGATACCCACATNCNNNNTNNNNACNANNNANTANNNTAGAGTATCTATGNNNTT
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CTNGNACCTGCCCNATGCCAGGATCATGGNACCAGGCNAGAGGNCACCCGTTNCTTCCTCCCNCA
TGTAGATAAATGGGTCCAGGG
Sequence 98 cMhvSE026f02
CTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTCCCNTACNGACACTGGCCCNAGTAN
ACGGTGAGTNATGGNGNCANTTGNNTGGGANGAGTTCATAAATATGNTTGGNAGCTAAANCGCAT
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NTGGTGANATNANTACNCAGGGGTTTGGT
Sequence 99 cMhvSE043b12
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GTCATAGATGGTNTGGGACATANTCTTCCTCCCTTAGAATCGTGGGGGAGCGTGATGATGATCCAC
TANGTGTTAGCAATATGCCT
Sequence 101 cMhvSE052g11
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NCTNNTCNTATCNACTATAGCNNTTNCTNGNNACATNACANTNCNNGCNNCAATCTNGANNNANT
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Sequence 102 cMhvSE003f06
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Sequence 103 cMhvSE003g02
CNAATTGGAGCTCCCCGCGGTGGCGGCCCG
Sequence 104 cMhvSE011c06
GCNAATTGGAGCTCCACCGCGGTG
Sequence 105 cMhvSE011e07
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Sequence 106 cMhvSE011f02
GAGCTCCCCGCGGTGGCGGC
Sequence 107 cMhvSE030e05
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Sequence 108 cMhvSE030g08
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Sequence 109 cMhvSE035b08
TTGGAGCTCCCCGCGGTGGCGGCCGAGGTACNAGACCCAGAGGCGGCTGCTCTCTCCCCCCAGCT
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Sequence 110 cMhvSE040g07
CTAATTGGAGCTCCACCGCGG
Sequence 111 cMhvSE010d06
GCTCCCCGCGGTGGCGGCCGAGGTACCACCATTGTAAGGAAACACTTTCAGAAATTCAGCTGGTTN
CTCCNAAANAAAAAA
Sequence 112 cMhvSE044h08
AGGTACCTTTNGACCCCATGGAAAAAAAATATCTAACGTNCAGAACTACCAAT
Sequence 113 cMhvSD003c05a1
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Table 1

TAGCAGTCAGGAATGAAAAAACGATACTGAATTTGAACATTAGGAAAGCTTGGTAAATTTCAAGA
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GAAGTAGCTAGGGGGAGAAACTGAAAATGCTAGGAAGACTGGGTGTGGTGGCTCATGCTTGTAAG
TCTCAGCTGCTCAGAAGCCTGACGTANGAGAATTGCTTGACCCCANTAGTTTCGTGACCAGCCTGG
AATATANCCAGACCCTGTTTCCATAAAAAAAAAAAGCTAGGAAGGTAA

Sequence 114 cMhvSD003d03a1
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GCAACTTTTTAACGTTGTGGATCCACAGAACTTACTGCTTTGCTTTCTCTTTTGGGGTCATAATTCC
TCTCCCCTTGGAGTGTCCACTCCATGCATGTGCACTTAGGATGTGTGGCTGTGTGTGTGTTTGGGAA
CCCTCACGGACACATAAGGTTCTATTGTCATCAAGTAGAAAACCTATCTCATTATCATTATAATGT
CTTCAGATGCTTTCTAAGGTTCACCTCTTTTTTAACATTAGAAGTCAGTGAATGCAGCTTTCATTAT
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TTCTTTGG

Sequence 115 cMhvSD090b03a1
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CAGGTGTGAGCCACCGCGCCCGGAAGGGGAAGGATCTCTTTATTCAAATACGCACATGCACGTGC
ACAGATACCTTGCATCTGTGAAAGGAAGCTAAGAAATCTGCAGTCGGCAGCTATTTGGAACTATG
GCTTATAAACTTATGTTTTTCAGGAGACAGAGAAACCAAGACTTGGGCCAGTCTTTGCAGTGACC

Sequence 116 cMhvSD090c03a1
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CACCTTCCAAAGGTCACAGAGAACCCTGGGCCCACCTCTGTGGCTGCAGTCACTGTGCTGATTGTC
ATGTCTGTTTACTTGTATATTTCTTGGCTACCCTGTTAGCTGCACAGGGGAGAGACAGATCTGATTT
GATTTGGTATTGCTAGTGTGAGACATAGACCTTGGTGCTCAATATATGTTTGTGAAAAATCACAGA
AGAGGCCATAAACTGGGGGCAGAAAATCAAAAGCATTAGGTCAAAAGATATCAGAGGATTCACA

Sequence 117 cMhvSD090c05a1
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ATGTAGCAGAACAGTAAACTGAAGCTCCGAACAGCGAAGGAGCTCACCCAAGAGAGCACAGGGC
TAGGATCAGGAA

Sequence 118 cMhvSD095a02a2
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GCAAGTGAATTTGCCTTACTCTAGGACCCACACTTTGGTGATCACAGCTGGATGAAGAATGTCAGG
GGATGAATCGGAAGAAATGAAACTGGAAAGAGGAAGGAACCAAGTCTTGAAGGGCCTTGGAAGC
CATGTTAAGAAGGATGAATGAGAGGTAAAGAAGACGACATTGAGCTTTCTCACTTGGGCAGTTGG
CGGATGGCAGTTGGTGGATGGCAGTGGGTGGATGACTTTACTGAGGTAGGAAGCCTGAGNAGGAA
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TGAAATTTGCCAAGGGGAGAGTTTNACCAGANNGAGAAAACCAGGCCCCAGGATTAGNAGCTTCC
CAAAGGAACTTTNAAAAAGTTAAA

Sequence 119 cMhvSD095c02a2
GGGGCCATTGAGACTGCCATGGAAGACTTGAAAGGTCACGTAGCTGAGACTTCTGGAGAGACCAT
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TCA

Sequence 120 cMhvSD095c04a2
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GATCGATGTANACCTTCGGAGATCACTGATACCTAGCCACTTAATCTCGTTCCTCACAGCCAGAGA
ATATACGTAAGTAAATTGCAGAAGTGTTGGACTCAGGAGAGGCCAGTTAGTTTGGGGCACCTCTC
TTACAGAGCTCTTTGGGTGGAAAGAAGAAGTGGTGAAATGACCTATGCTTCTGTTTCATCATGACA
GGGAAATCTGGAAGGGGAATTCAGTCTAGTGAATTTACTTAAAATATTAGCTGCANNAAACTAAT

Table 1

TTACAGGGGAAAGCGGCTTTGTGACATTTTTAAGTGTAGAANGATCCANATGAGAAATGTGAATTT
CNTACCAGAAACTTTGGGGTAGTCCT
Sequence 121 cMhvSD095d04a2
AGGTACTTTTTGGTTACTACCTTTACAGACGGCATCAACATGGACCCTCACACCTGCACCTGAGCA
ATGTGGGACATTTGATTCCTCATGGTGACAGTTTCTTTCCCACCCCAAGCTCCAGGGAGACAGTAA
GCTTTCTCATCATTTCTCTGGGCTTGTGGGCAAACATTTTTTAGTCTATGGGAACAGGGAGCACTTC
CAGACTCTATTCTTCATGCAGGAATCTTAATTAAAACCTCTCCACCTCANATATGCCTGCAGCCAC
GTCCGTTGTCCCCAAACAGATATTAAAATCCAGCATTAGGACCACTTAGCCCTATTCCTATTTGAA
AGCCTCTTTGGGCAGCCATGATATCATTATTATTCTCCTTATTCTGGGATTGCTTTTTTACTTCATTT
CTTCTTCTTTTTAAAGTATTANGCTCTATTGAGATATAATTCAGATATCACACCAANTCACCTATTT
AAAAGTATACCAATTCAATGGGTTTCTTAGTATATTCACAGAGCTGGGCAACCATCACCACAAGCC
AATTTTTAAGAACATTTTTTCTTACCCTAAAAAAAAGAAACCCCCNGTACCCTGCCCGGGGCNGGC
CGNTTNTAAAAACTAAGTGGAATCCCCCCGGGGCTTGCAAGGGAATTCCGANNTTNAAGGCCTTN
TTNGAATACCCGGCCNACCCTCNNAGGGGGGGGGG
Sequence 122 cMhvSD095f01a2
CCGGGCAGGTACTTTAATACCTGTGATCAAGGTGTCTTTAAATAATTGCTTTCATCTGTGAATGGC
GAAATTACTAGCATAATAAGATTGCTGTAATATTGGTCAGCTTCTGGAGTAGATAGATAAAGAATT
GTGTAATCAGTTTGTGTCCCCAGCTGAGGGGATATTCCTTCTCTTCTCGTTTTATATTAATTGAATT
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AGAAATCTTAATTTTTCTTTCACTACCTCCCTAAGGAAGGNTAACGTTCACTATTCAGTATCTTTTC
ATACTTTTTTCTTTGGTTCTACAGTAAACATAAAATAGCTATATATAGNGGCCCCTTTTAAATAAAA
ATGTGGATTGTGCAATNACAACAATTATTTTTATTCCTTTTNAAACACNTTGTTTCAAGGGGTTCTT
GGGGCC
Sequence 123 cMhvSD095f11a2
CCGGGCAGGTACCTGAGGTGACCCCAAAATTCATCCAAATATTCTATCCAAGAGCAGGCAAATGC
TACATGGGAAATCACAAAGAGGAGGAAAAAAAGAGAGAGAAGAGACAAANTGAAGCTTTGACAA
GCAGCTCAGCTGGGCCAGCCCCTTGGAAGGGAGCCAGCATTGGGAAAGCAGCANCAGCTC
Sequence 124 cMhvSD095g09a2
CGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACCATGGCACATATGTGAGGTTTTCT
TCAAAACAGATTGTGTTGCAGGAACTGAAACACCACCAAAAACAATCCCATTAAATGTGGGCAAA
GGGGCCGGGCCTGGTGGCTCACACCTGTAAGCCCAGCACGCCTGGCCCCCATATTCTTAACTACCA
AGCTGTATGCTCTCTGGGATCCTTCACAAAACATGAATGTCACTGCTCTGCTGTATGCCTCCAGTCT
CCCCATCTCTCCTCTCCTCCATCATCATACCTTTTCCAGCCTGTCCCTTGTGCAGTTCTTGGCTCACC
ATCTGAGTATCTATGAGACTGCTTAAAGTCTCTCTGCCTGGAATTAAAACTTGCAAATGAAAGCCT
T
Sequence 125 cMhvSD095h03a2
GGCGGCCGAGGTACCTTTCTTTCCAGGCCATGGCAAAAAAAATCCAATTATGTCCGTCTTGAGTCT
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AGCACATTTCATTTCAATTGTGAAGAAAAGATTCCAGGCACTGAATGTAAAATTGAACATGACATT
TTGACATTCCTTCTTCTGAGAGCTGGGTTGGTCTTAGTTGCTGTGAGGCTCTANACACCGACCATAC
AGGGCGTGGGGCTGCTCCTGGACATGAACATACTTACGAAGTTCTCCCCAATCCACTTTACCCCGN
CCCCGCGTACCTGCCCCGGGCGG
Sequence 126 cMhvSD084g12a1
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GGGGGACTCCCCTCCTGGTCGGATCAGTCCTCTCCCTCAGTCAGGTCAGGCTTCTCCTCCACGGCC
ATCTGTCCATTTCGTCCGGTTACTTGCTACCAGGTCGCAGTTGCTGCAGCTACTCCAGT
Sequence 127 cMhvSD090c04a1
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TGAGTCCTGGCCTGCAGCAGCCACATTCAGGAGGGATATGAGGGAGTTGGCCCCTACCTCCTACGC
AAACCCCAGGGTTTATGTCCTTTACTGACTTCCACATTCCTTTGATGTCCCATGTATGTGACTGGTC
CCTCTGGACTTGCTTCTGGGGACATCATGAACCTGACTCTGTAGGATGTGGGGCATTGCCCAAATA
GAGA
Sequence 128 cMhvSD090g02a1

Table 1

CCGCGGTGGCGGCCGAGGTACAGCCTGTGGAACTCTTGAAACATGGATTTTTTCCTAATAATTGAA
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TGCTTTCTTCAATATCAATTATAATAATATTTTATCTTTAAAATCAGAATTTTACCGAAACAGTTTT
GTCATTTTATTATTTAACTGATGAGAAAAACTATATGTGATTTAGAGTTGCCATGAGTCCTGATTCA
AATCAGATTACTTTTCTTTTGCTAAAAACTTAGCGCAGTAGCCCACCTACAATCCTGCTTGCTTAAG
GGGAAATGGTACCTGCC
Sequence 129 cMhvSD090g04a1
CCCCGTAATACCGACCTCACTATAGGGCGAATTGGCAGCTCCACCGCGGTGGCGGCCGAGGTACC
CCAAACAAGTTTTCCTATTTTATTTTTATGCTTACAGATACTCAAATATTAACAATTTAATTAATCA
CCAGCTATTAAAATCATGAAAACATCATGAACACACACTACCGGTGTGGATCTCCACAGTGCTGA
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GTAAATCTAGCCTATGAAATATTTTAAGCAAAAGACAGAAAGAAGTCTCAAATGTATGTGGTGTA
TGTGGGGTGTGTGTGTGTGAGAGAGAGAGAGAGAAAGAGAGAGGGAAAGAAAGACACAGAGAC
AGAG
Sequence 130 cMhvSD095d06a2
AGGTACATTTTGAACTCCCAATTCCCACCCACAGAGCTTGGTGCTAGCTCTGCACACGGTAGATAT
AAGCAAGAACTTAGGCCGAAGTGAATTGAATGACCCATTCTTACCAGATAATTCTGTTCTTGCAGG
GGTATTTCGGATCTGGGTTCTGCCTCAAGGCTGACGGAATCAATACATTCAGCAAGTGTATCCTCA
GTCACGTCTCCATTGAGAGGGGGCTCCAGGGCGTTGGCATCCTGAGGCTGCACAGGGGGCCCAAT
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TGTT
Sequence 131 cMhvSD095f05a2
TGCTTCTGCTATGGCGAGGAGTCCTCGGCCTCCAGCCACTGTGCCCACGCCTACCGGTTTTCTGGG
GATGTTGCCACCACCTCTGAAGAGTGAAACCAAGCTTTCCATGCAGGAAGAGCCAGGTGCTGGGG
GCTCCCGCCCGAACTGTGAGGCCCACAGTGCTTAGGGAGAGCACCAGGCTCTACCTTTCTTTCTTG
ACAGTGGGTGAGCAGCGCAGGCAGAGATGTGCAAGGTACCT
Sequence 132 cMhvSD001a06a1
GGACCGAGGGTTTGGTGCACCTCGATTTGGAGGAAGTAGGGCAGGGCCCTTATCTGGAAAGAAGT
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CAAGTAGTCCAAGGCCAGTGAATCA
Sequence 133 cMhvSD001b09a1
AGGTACACGTCTCTGTCTGGGCCTCGGCCAGGGTGCCGAGGGCCAGCATGGACACCAGGGCCAGG
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AGGGATCCCCGCGTACCTGCCCGGGCGGCCGAGGTACCAGCCGCTCATGTTTTTATCGCACCCCTG
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AAAACAGACATGAGCCTCTGGGGTGCCAGGAGCTCCGCAGTCCAGGTCCAGCCCATACGAACTGG
CTTCAATGGGGTTTCCATAACCTCG
Sequence 134 cMhvSD002a08a1
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TAACAGCTGTCTTGGCCTCAGGGGTCATAAACTAATGGCCTCAGTAATAAAATATTTAATAGAAAT
TAATGAGATAGGCCCAATGATGTGGGCCAAGTAAAGAGAGGAGAAATAAGAATTGGTGGGAACT
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TACCCCGCGTACCTGCCCN
Sequence 135 cMhvSD002e03a1

Table 1

CCGGGCAGGTACAAGGGGCATTGTCAGTGAGTGGTAATACTTTGAAAGGAATCTTATTTCTTGAGC
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AAAAAAAAAAAAAGTNCCT
Sequence 136 cMhvSD003c02a1
GGCAATTGGAGCTCACCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGGTCCCAGCGTCGCTC
CGGACGCTGCCAACCTGTTCTCCACCGTCGCTCGACTTCCACCTCTAAGACTCCCACCTTCAAGATC
CTTCTGTCTAGTGTTTTGGGTTCCCTACACCAGGATTGTGGAGGAAGCGCACGGCCAGAACCCGTT
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GTTGTCTTTGTGAGGCCACCTCTATAATGGATAATCAAATAGAGGGAAGGGCGGGATTGAATATTG
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CCCAAGCACTTATTAAAGTGATGTTACTCTGTTTCATTCTCCAGGAAACTCAGGTTGAATAATTCAT
CAAATTACACAACTGAACTCAAAGACATGGCTGCCCAGTGTGTCACAAAGGTGGTGCTGAATGTTT
CCCGTGCCAATCTTT
Sequence 137 cMhvSD003c02a1
GGCAATTGGAGCTCACCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGGGTCCCAGCGTCGCTC
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GTTGTCTTTGTGAGGCCACCTCTATAATGGATAATCAAATAGAGGGAAGGGCGGGATTGAATATTG
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CCCGTGCCAATCTTT
Sequence 138 cMhvSD003f08a1
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TTAGTTCTCAAACATTAATTAAGATGCTGAAGAAGGTCACTATACATAACCCGTGGTTTCCACAGA
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GGTCTTAAATTTGATCTTTTTGTTTTTCTGCTTGGAGTTTAGTCCGTGCTGTCCTCCTGCCATTATC
TTCTTCTTATTCTGCTAGACAGCAGGAATCATATTCCGAGTCTAAAAATCTGAAAAAATATTTTGTC
CCACCCACAGTACCTGCCCG
Sequence 139 cMhvSD004d09a1
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CACTGTCTTCCACCTCCACATTTTGTCTCTGGAAGGTCTTCAGGGGCAATAACACACATGGAGCTG
TCATCGCCTGTGGTAACAACGCAGAGTACCT
Sequence 140 cMhvSD004f03a1
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CTGAGGACAGGCGGTCCTGACTCCCGCTGCCCGGTGGAACTAAGACCAGGGACGAGGCCACGCAG
GAGATCAAGGTACCTNTNN
Sequence 141 cMhvSD004h08a1
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CAGATAAGGGCCCTGCCCTACTTCCTCCAAATCGAGGTGCACCAAACCCTCGGTCC
Sequence 142 cMhvSD005b02a1
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ACTTCTCCCTCGCCGCGCCTGTTACTGCCTCCACGGATCACTCATCCTCGCTTCGCGTTCTTCCACT
AAAGAACCTGGGGCGCCGCACTACAGCGCCGCGGCCTCCCCGCGTACCTGCCCG
Sequence 143 cMhvSD005c07a1
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Table 1

GCGCCTAGCCAAATCAGGGTGCTCTTGATAAAAATTCTTCTCAAATTTAGGCAGCTCATCAAGATT
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Sequence 144 cMhvSD005h11a1
AGGTACTTGNNCCAAATGTGCAACATNAATNCGGAACCNANGANCANAAGACTNNTTACCNATAC
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TGCNGAGGNTGTGCNGACTGNACTNCTTGTNCNANANNNGNCNTTNNNNCTCTNCCNNACNGNNN
ATNCCNNTGCCC
Sequence 145 cMhvSD005h11a1
NGAACATCAACTTTTGANCTTTTAGTGANGGTATATANCGCNCTCGGNCTTNNNATNGANATNCCT
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AGC
Sequence 146 cMhvSD005h12a1
NCGCCCGGGCAGGTACAGGTATTTGTTGCATTATTCTAACAACTTTACTGCAGATTTCACTTTTTCA
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CAACTAGGAACCTGCTGTGGGTCACAAGCTTGGGAAGCTGCTGGGGGCAGATTTCACTTTGTGCTT
CTGGGTGAGGGCAGGGGCGTGAGGGTGATAAAATACTTTTGTGAGCTGAACAGNGGGGAAACAA
AAGTTTCAAAA
Sequence 147 cMhvSD006e04a1
CCGCGGTGGCGGCCGAGGTACCTTCTCACACCTGCGTTCTTTTCTTGAGAGATACTGTGATAAAAT
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Sequence 148 cMhvSD007g03a1
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GGTGCAGGAAAGCTTCAGTTTGTCAATATCACGCAAGACAGGGACACCAAACACTACCCCTGCCC
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Sequence 149 cMhvSD007g04a1
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ACACCACTGGAGAAATGGTGATGACG
Sequence 150 cMhvSD007g04a1
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Sequence 151 cMhvSD007g04a1
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Sequence 152 cMhvSD008d08a1
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Sequence 153 cMhvSD008e08a1
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TTATTCTGGAATTTCGCGTATACAGATGCATGCCATGCCATAGGTACCTGCCCG
Sequence 154 cMhvSD008f08a1
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Table 1

Sequence 155 cMhvSD008f08a1
CGGGCTGCAAGGAATTCGAATNTCAAGCTTTATCGATACCCGTCCNACCTTNTATNGTNGTGGGCC
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CGTTA
Sequence 156 cMhvSD008g09a1
CCGCGGTGGCGGCCGAGGTACAAGCAGTAATTGATTCACTGGCCTTGGACTACTTGCAGGTCANCT
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GTTTAGAACTGGCTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTGTATGTTTCC
ACCTCTTGTGCTGTGCGCCTANNCAAATCAGNGGTGCTCTTGATAAAAATTCTTCTCAAATTTAGG
CAGCTCATCAAGATTCCACTTCTTTTTAACTAATTTCTCCCCAGGGTTTCCAAACTTCTTTCCAGAT
AAGGGCCCTGCCCTACTTCCTCCAAATCGAGGNGCACCAAANCCTCGGTCCCN
Sequence 157 cMhvSD009c12a1
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GGGATCAACTTCGAGTACCT
Sequence 158 cMhvSD009f06a1
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TGTCTCACCACTCTT
Sequence 159 cMhvSD009g03a1
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Sequence 160 cMhvSD010b09a1
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GCGCTGCCACCTGGGTGGATGGTCCCCGGGGCCCTATTCCCAGTTGCTCCAGAGCCACTATTTAGG
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TCATCATGTCCTAGCACAGATGGCCCCAAGCAGGGGAAGTACCT
Sequence 161 cMhvSD010c04a1
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GGGCCACTGGTA
Sequence 162 cMhvSD010c04a1
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GTG
Sequence 163 cMhvSD010c09a1
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Sequence 164 cMhvSD010d08a1
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AAGTGCTGCGTAGAAGAAGGCTTGGAACCTGTCTGCTTTGAAAGGACTGATGACATCGGAGGGCT
CTGGAGGTTCCAGGAAAATCCTGAA
Sequence 165 cMhvSD010f12a1
CCGCGGTGGCGGCCCGAGGTACAAGCAGTAATTGATTCACTGGCCTTGGACTACTTGCAGGTCAGC
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Table 1

GTTTAGAACTGGCTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTGTATGTTTCC
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GCTCATCAAGATTCCACTTCTTTTTAACTAATTTCTCCCCAGGGTTTCCAAACTTCTTTCCAGATAA
GGGCCCTGCCCTACTTCCTCCAAATCGAGGTGCACCAAACCCTCGGTCC
Sequence 166 cMhvSD010g02a1
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GCCTTTAGTGAGAGAGATCCTTGGGCAGTTTTTATGGGATCATAAATGAGAACGACAGATTCTTCA
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GGACTGATACCAGCCCACGTGAAGATGATCAATGTTTACATGGCGAAGCTCCGCATCATTTCCATC
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AACTGGCCCTGATTAC
Sequence 167 cMhvSD010h04a1
CGGCCGAGGTACAGTGCAGAGGACTGGAATGGATATAATGTCTGCAAAACAAAAACATGTCTAGT
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ATCATTTTTTTTTTTTTTTTTGAGATAGAGTCTCATTCTGTCACCTAGGCTGGAGGGCAG
Sequence 168 cMhvSD011c10a1
CCGCGGTGGGCGGCCCGCCCGGGCAGGTACAAGCAGTAATTGATTCACTGGCCTTGGACTACTTGC
AGGTCAGCTTGTCTCACATAACAGGTTGGTATATGTATAACTATCACATAATTATGCATTTTAGTA
AAAATAATTGTTTAGAACTGGCTTCGGACAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTG
TATGTTTCCACCTCTTGTGCTGTGCGCCTAGCCAAATCAGGGTGCTCTTGATAAAAATTCTTCTCAA
ATTTAGGCAGCTCATCAAGATTCCACTTCTTTTTAACTAATTTCTCCCCAGGGTTTNCAAAACTTCT
TTNCAGATAAGGGGCCCTGCCCTACTTCCTTCAAATCGAGGTGCACCAAACCCTCNGTCCCGGC
Sequence 169 cMhvSD011e09a1
CCGCGGTGGCGGCCCGAGGTACGCGGGTCCCCATGTGTGACGCCGGTGAGCAGTGTGCAGTGAGG
AAAGGGGCAAGGATCGGGAAGCTGTGTGACTGTCCCCGAGGAACCTCCTGCAATTCCTTCCTCCTG
AAGTGCTTATGAAGGGGCGTCCATTCTCCTCCATACATCCCCATCCCTCTACTTTCCCCAGAGGACC
ACACCTTCCTCCCTGGAGTTTGGCTTAAGCAACAGATAAAGTTTTTATTTTCCTCTGAAGGGAAAG
GGCTCTTTTCCTTGCTGTTTCAAAAATAAAAGAACACATTAGATGTTACTGTGTGAAGAATAATGC
CTTGTATGGTGTTGATACGTGTGTGAAGTATTCTTATTTATTTGTCTGACAAACTCTTGTGTACCTG
CCCCGGGCCGGCCCGTTCTAGAAACTAGTGGGATCCCCCCGGGCCTGCNANGAAATTCGATATCA
AGCTTATCCGATACCGTCGAACCTCGAGGGGGG
Sequence 170 cMhvSD011f10a1
CGCCCGGGCAGGGTACTTGGATTACAGGCGTGGACCAGCATGCCATGCCTATAGTGATATCTTTAA
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CGATGTGCTTTCCTAATGCCTGTTAATAAAGTAAGGAGCCAAGGAACCTCTGTGATTTCAATGAAA
TCCCTCCAGATATTATAGGCTACTTGTTACTGACAAGTATGGCAGGAACTGCAGGTCAAGCTGTGA
TAGGCAAATAGATCTTGCTGAAGAGGAAGAATGATTGGCTAAGATAATGCCCCAAGACAGCTGGC
ATACCTTTAGACACAGCTAAATTGAATGCTTTCTGANGAGGAGTGTATTAAGTCTGTCTCACACTG
ATATAAAGACATACCTGAGAATGGGTNATTGAAAAAA
Sequence 171 cMhvSD012a08a1
GGTCTCGGTCACTCGAATAACCCGACATGGCGTCAATGGTTGCGGTTGGCGGGGAACGAAGTATA
TAGAAAAGCGTGCGACAAGTCGCTGGAAATGGCCTCGATGACGGCGAAGCCTTGCGGGGGCNGGC
AGCGGAGGAAGGACACCGATGACACCAGCCGAAGCTGCACTACTAGAGACCGGTAGAAATGAAT
GAGGTCCCCGCGTACCTCGGCCGCCCGGGCAGGTACAATGCAAAGTATAGGCTTTTGAACTAAATT
GGCCTGGGTTCAAATATGAGCCCTCTCACATTCTATTAGGTTGAACCATATAAAAATGGAGATATT
CAATCATTTTTTTACAGTTTCACGTAGTTCA
Sequence 172 cMhvSD012c04a1
CCGGGCAGGTACCTTTGGTTAAGAGTAGACAAGGCAGACATCTGAGCCTGCATGACTCAGCAAGT
TTAGGGTGCAGGCACATACTCCACTTGTTGTATAACCTGTTTGTGTAAGCTGATACTTGCCTTGGAG
CCACTATTGTCTGTAAAAGGTATAACTGCCCTGCTGACACTGTGCATGGGGGACATGGCTTGGCTT

Table 1

GGCTCTTGGGCATGGCTTGACATGGCTCTTGCGCTCATGCCCAGAGAGAGAAGGAGATAAACTGC
TGACCCTGA
Sequence 173 cMhvSD012e09a1
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ACCCTCTCTTTTCTTCTTTNGANCAATTTTTCAAAGCAACAGGCATTTTATTAAATAAGAAAGTCNA
TGTGCTTTCCTAATGCCTGTTAATAAAGTAAGGAGCCAAGGAACCTNTGTGATTTCAATGAAATCC
CTCCAGATATTATAGGCTACTTGTTACTNGACAAGTATGGCANGAACTGCANGTCAAGCTGTGATA
GGCAAATAGATCTTGCTGAAGAGGAAGAAT
Sequence 174 cMhvSD013d01a1
CCGCGGTGGCGGCCGCCCGGGCAGGTACAAGCAGTAATTGATTCACTGGCCTTGGACTACTTGCA
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AAATAATTGTTTAGAACTGGCTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTGT
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TTTAGGCAGCTCATCAAGATTCCACTTCTTTTTAACTAATTTCTCCCCAGGGTTTCCAAACTTCTTTC
CAGATAAGGGCCCTGCCCTACTTCCTCCAAATCGAGGTGCACCAAACCCTCGGTCC
Sequence 175 cMhvSD014d03a1
CGCCCGGCAGGTACGCGGGGAGAGGGAGCTGGGCAGGGCACAGCAGGGCAGGAGTGTGTTTGAT
GTGTCCTGGGAACCGCCCTGAGGCCGTCGTGTGGCTGGAGTGCTGCAGGTGTCAAGGAAATTGTA
GGAGATGTCTCCTGAGTGTGATGGAATATAACCAGATTTCCAGAAGGAACTGACATGATCTGACTT
AAAAAGGCCACCTACATTTACATGAAGGCCGCCTACCTCAGCATGTTTGGGAAGGAGGACCACAA
GCCGTTCGGGGACGACGAAGTGGAATTATTTCGAGCTGTGCCAGGCCTGAAGCTCAAGATTGCTG
GGAAATCTCTACCCACAGAGAAGTTTGCCATCCGGAAGTCCCGGCGCTACTTCTCCTCCAACCCTA
TCTCGCTGCCAGTGCCTGCTCTGGAAATGATGTACCT
Sequence 176 cMhvSD014f04a1
GGGGCCATTGAGACTGCCATGGAAGACTTGAAAGGTCACGTAGCTGAGACTTCTGGAGAGACCAT
TCAAGGCTTCTGGCTCTTGACAAAGATAGACCACTGGAACAATGAGAAGGAGAGAATTCTACTGG
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GGATTCCTCTGAGCGCTGTCTATCGCATCTGCCTGGGCAAGTTCACCTTCCCTGGGATGTCCCTGGA
CAAGAGACAAGGAGAAGGCCTTAGGATCTACTGGGGGAGTCCGGAGGAGCAGTCTCTTCTGTCCC
GCTGGAACCCATGGTCCACTGAAGTTCCTTATGCTACTTTCACTGAGCATCCTATGAAATACACCA
GTGAGAAATTCCTTGAAATTTGCAAGTT
Sequence 177 cMhvSD015c06a1
GCGGCCCGAGGTACTGTCCAACTGGATGCTGCCCTGGTGGCTGAAGGCACACTTCATGATGCTGTC
CAGGGTCATCAGGGAGACATGTTGAAAGAGCTCCAGACGTGAGTTTTGGGCAATGTGTTCCTCCCA
TTTGTTCAGCATCATCCGAACACTCTCAGACATCATGGTGATGAATATTTTCAGAATGCTGATGTTG
AAGCCAGGTTTCACAATCTGGCGGTGCTTTTTCCATTTAGAACCATCCAGGGTCACAAGTCCTCGA
CCAACCCAGGATTCAAGGATTTTGTGGCTAACAGCACTTTTGGGATCTTGTCTTTTCGGGAGAATC
TTGGCATAGTCTGGGTCATGGACACTGAAGAACATCGTAAAGGGTCCAACCCACAAGGGAACAGC
ACATGGGTATTTTTCCATCAGCTTATGATACACCTCAAACTCCTTTACTGGGTAAAACTCCTTGTGG
CCATAAACCAAGTGGGCAGGGGGTGCANGAAAACAGGTGCAGGGCTCTGAACATCCATCTCCTCC
TNTGGTACCTGC
Sequence 178 cMhvSD016d08a1
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Sequence 179 cMhvSD016f01a1
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CGGTNNGCTNTTCGAGTNCTGAAAGGTGTGAATAAGTTACCACCACCAAGTGTCATGATAGAGGA
AATTAATGCAAGGAAAGAAAACAAGCCCAGTTGTTCCGCTTGACTGGCCCAGGAAAATGGGAAGG
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CTGCCCG
Sequence 180 cMhvSD016f07a1

Table 1

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AGCCCAGGGATTCAAAGGTTCGTGGCAGAAATATGCATCCCACGGGACTCTCACTCACTCACCATT
TTCTTGTAGGGGGATTCCCCTGGGTCTGTGCCACTCCTGGGTGAATGGTTGATCTGTCTCACTCTTC
TCCGTGATCCGAAGGTCACACTATGTCACTGATGAATCCTTATGTGTCCACCTGGATGTTCCGGTTG
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AAGAAGCAGATCCCCCAAAATGTAAGAANTCACTTGAAAANGNGGGGAGCTCAAACCCAAGANA
AGGACTTATCTNGCAGCATAAAAAACAACTTGTACCTGCCCGGGCCGGGCCGNTTTAGAACTANA
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GGTN
Sequence 181 cMhvSD018b02a1
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CCCTNAAAAAGGATTTGANNAGGCCNNTTNTGNCCATNTGCAAAAGGNTCCCCAAAAGGGGCAAA
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GGCCTNTNAGGANTGCAANGAAAAANAGGACCCTNANCNCCATGGTTCCAGNNTNACTGCCCTGC
CCCCGNGTACCTGCCCG
Sequence 182 cMhvSD018b02a1
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ATANAAACCNGGAACAAAANNGAAAACCC
Sequence 183 cMhvSD018h06a1
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GTTTCAGATAGAAAATGAAAAACAAGCTAAGACAAGTATTGGAGAAGTATAGAAGATAGAAAAA
TATAAAGCCAAAAATTGGATAAAATAGCACTGAAAAAATGAGGAAATTATTGGTTACCAATAGAA
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TGAAATCCATGACGCAGGGAGAATTGCGTCATTTAAAGCCTAGTTAACGCATTTACTAAACGCAG
ACGAAAATGGAAAGATTAATTGGGAGTGGTAGGATGAAACAATTTGGAGAAGATAGAAGTTTGA
AGTGGAAAACTGGAAGACAGAAGTACCTCGGC
Sequence 184 cMhvSD019b10a1
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AGTGAGTGAGGTGGGGCCAAGATGGTTGACTAGAAGCAGCTAGTGTGTGCCACTCTCACAAATAG
CAGAAAGAGTGGTGAGACACTAGCTCTTCAACCGGAACATCCAGGTGGACACATAAGGATTCATC
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TATTTCTGCCACGAACCTTTGAATCCCTGGGCTCANGAGATACCCCAGCTGGGGTCTCCAGACCAA
AACAGAGAGCCATGTGGAGTCTGGGTAGAGCTGCTTCTTANGTAGGTGTGGAGTCCCAGTAGCAT
TTGTTCCCTGGGNACCTGCCCG
Sequence 185 cMhvSD019b10a1
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Sequence 186 cMhvSD019c04a1
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TGAGAGTTCGCTTTCAGATCCTGGGCCCGGAAAGCAAGA
Sequence 187 cMhvSD019f07a1
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GCGGAGGAAGGACACCGATGACACCAGCCGAAGCTGCACTACTAGAGACCGGTAGAAATGAATG
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Table 1

Sequence 188 cMhvSD019f08a1
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CCTAGCCAAATCAGGGTGCTCTTGATAAAAATTCTTCTCAAATTTAGGCAGCTCATCAAGATTCCA
CTTCTTTTTAACTAAATTTCTCCCCAGGGTTT
Sequence 189 cMhvSD021a11a1
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TGGCTGTGTCAGCTCATAGGAGGCCACAGAGACTGTGCAGAGAATGAGGAGGGGGAGCAGGAGA
GGGATCCAGGCCATGGTGAGACATTCAGAGCTCTGCCTCCTGAGCCTACAGCCCCCGCGTACCTCG
GCCGCCCGGGCAGGTACTTTAATAGCTCAAACTCAGAGTCATCGTGCTCCCAATTCCAAAGAGATT
CCTAAAAGAGGCAACTT
Sequence 190 cMhvSD022b06a1
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CCGAGCAGCATTCTCTGTAGAGGAAGACAGGAAAGGAGACCCTCTTGGCACACATTTATGGAGGG
TTGTCCCTGAAGAGAAGGGCAGGTGGGAGAGGTTCCCTGTTACTTAAGAGAAGGCACCAGTGGCA
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CTTCCACCAGAATTTTCGAGCCACCTTCTGCGATGTCGTCTTGAAGTGCTCAGATGTGGCTTCCAGA
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TACCTTTGGGCCGNTTTANNAACTAGTGGATCCCCCG
Sequence 191 cMhvSD022f04a1
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CACTAACACAGGGGCCTGGCCTGGCTTCTGCTGGAACCACCGAGCATCTTTTTTTGCCAGTACCTC
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TAATTGGATNCCCCCGGCTTGCAAGGAATTCGATATTAAAGCTTATTCGAATACCGGCCAACCTNN
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Sequence 192 cMhvSD025a09a1
CNCGGTGGCGGCCCGAGGTACTGTNTAACTGGATGCTGCCCTGGTTNCTGAAGGCACTTTTCATGA
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GATGTTGAAGCCAGGTTTCACAATCTGGCGGTGCTTTTTCCATTTAGAACCATCCAGGGTCACAAG
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Sequence 193 cMhvSD025d09a1
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Sequence 194 cMhvSD025f12a1
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AAAAGTTTAAAAAGTTAAAATACTAAGTTTATAAAGTTAAAAAGTTACCCCGCGTACCTGCCCG
Sequence 195 cMhvSD025g04a1
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CAAACTCTTCAAGTATATTCATTCATTCAACAAAATTTTTGCATGCCTTCTATGTCGTAGGCATTTT
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Table 1

CAGAAGGAGAGTGGGGAGGAGACAAAAAACAAATAAGACCACTTCAGACAATCAAAGTATCAGT
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Sequence 196 cMhvSD025h04a1
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GAAAGTCTCAGAGTCTCACCCAAGGCCCATGGTATACTACTTGGATATTGCTGCTGGTTATTCAAG
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CAGGTTCCCTTCTGGCCCAGGGTGTTTCTAAAAATGGTTTCTGGGAGCTAGGAATCCCCACTCATC
AAAGAGGACTTCAATGCAAGACAAAGTCCTCTTTACTCTTCTCCCTCCTCTCCCAAGAGGAAGGAA
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CTA
Sequence 197 cMhvSD025h05a1
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Sequence 198 cMhvSD026c04a1
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Sequence 199 cMhvSD026c09a1
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Sequence 200 cMhvSD026c09a1
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Sequence 201 cMhvSD026d02a1
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GCTTTTGGAAAGAGCTAGCCTCATACCACTTCAAGTTGGGGAAGGGGGAGTACCTCGGCCCGCTCT
AGAAACTAGTG
Sequence 202 cMhvSD026d02a1
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ACCACCAACCATAACGAAGCCCGGGG
Sequence 203 cMhvSD026d07a1
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CCCGCTCTAGAACTAGTG
Sequence 204 cMhvSD026d07a1
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GGGGAG
Sequence 205 cMhvSD026d09a1
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Sequence 206 cMhvSD026d09a1

Table 1

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Sequence 207 cMhvSD026f02a1
AGGTGCAGAAAACTCTCCTCATCTGGACCCGTGACGTCCTTGCAGCCCGAGTTGGCCATATCCCAC
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Sequence 208 cMhvSD026f02a1
GCTGTTTCCTGTGTGAAAATTGGTTATCCGCTCACAATTTCCACACAACATTACGAAGCCGGGGGA
G
Sequence 209 cMhvSD027a02a1
GCTNATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGGGAGTCCTTGGAGCGCTGTGTTNTT
TACCGTGGTGGTGACTGGATCCAGGAGGTCGAGAGTCGTTCTTCTCTTTGCACAGACGTGACTCTG
CAGCTCTTTAACGGCGCCCGCTGCTCTCAACCCAGCTTACCCCACGTGGTCCCATGGCGGCGGCCG
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Sequence 210 cMhvSD027a10a1
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Sequence 211 cMhvSD027f02a1
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Sequence 212 cMhvSD027f09a1
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Sequence 213 cMhvSD027g04a1
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ATCAGGTCTCATTAAACATCAAAGAATTCACACAGGAGAGAAACCCTTTGAATGTAGTGAATGTG
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TATGGCTGTAACGAGTGTGGGAAAGCGTTTGCNGTATATGTCGTGTCTGGTTAAGCATAAGAGAAT
ACACACAAGGGAGAAACAAGAGGCAGCCAAGGTGGAAAAT
Sequence 214 cMhvSD029b07a1
CCAGCAGAAGCCAGGCCAGGCCCCTGTGTTAGTGATGTATAAAGACAGCGAGCGGCCCTCAGGGA
TCTCTGAGCGATTCTCCGGCTCCAGTTCACGGACCACAGTCACCTTGACCATCAGTGGGGCCCACG
TTGANNATGAGGCTGACTATTACTGTTACTGTGCGGCCGCCCGGGCAGGTACGCGGGGAGTCGGG
CCGCGCCGCGCCTCAGCTCTGGTTGATGATAATTAGAAGCATGCTTTCCACTGAACTTCCCGACAA
CATTTGTTATGCAGAATGTCTCTGAGTGAGAACTCGGTTTTTGCCTATGAATCTTCTGTGCATAGCA
C
Sequence 215 cMhvSD030c12a1
ANCAACTAACCGCTCCGTGAACTCCACATCGTTCTCAAATTCTGGGAAGTGTTCCATCTCAATTCC
AACCATGAGGTACCTGCCCGGACCTGCCCGGGCGGCCGCTCTNGAAACTAGTAGGATCCCCCCGG
GGCTTGCATGGAATTNGATATCAAAGCTTTATCCGATACCN
Sequence 216 cMhvSD030f04a1

Table 1

AGGTACTTGTTGTTGCTTTGTTTGGAGGGTGTGGTGGTCTCCACTCCCGCCTTGACGGGGCTGCTAT
CTGCCTTCCAGGCCACTGTCACGGCTCCCGGGTAGAAGTCACTTATGAGACACACCAGTGTGGCCT
TGTTGGCTTGAAGCTCCTCAGAGGAGGGCGGGAACAGAGTGACCGAGGGGGCAGCCTTGGGCTGA
CCTAGGACGGTCAGTTTTGGTCCCTCCGCCGAACACCCAAATGCCATTACTCGAGCCGGCCGCCCG
GGCAGGTACCGCGGGCTGGTGACCTCAGCCAAGAATGAATTCAGGCCATCCGGCTACAAGGCCAA
AAGCTTTNCCCAGCTTANCTACTTTGAACCACCCTGCTTTCTGGNTTTTTCTGGTTTCCACTTGCAA
AAATTGGGANGGGTGTTTTGNTCCTTTTTCCCTTGGGCNTTCCAAACAATTCAAATTTTAAAAA
Sequence 217 cMhvSD030g01a1
GGCGAATTGGAGCTCCACTCGCGGTGGCGGCCGAGGTACTGTCCAACTGGATGCTGCCCTGGTGG
CTGAAGGCACACTTCATGATGCTGTCCAGGGTCATCAGGGAGACATGTTGAAAGAGCTCCAGACG
TGAGTTTTGGGCAATGTGTTCCTCCCATTTGTTCAGCATCATCCGAACACTCTCAGACATCATGGTG
ATGAATATTTTCAGAATGCTGATGTTGAAAGCCAAGGGTTTNACAATCTGGCGGGTGNTTTTTT
Sequence 218 cMhvSD030h02a1
GGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAAGGTACATTCTTCTCAGCACCTTAGA
GCCCACTGATGCAGGCATACTGGGAACGACTAAGGACTCACCCAAGCTGGGTCTGCTCATGGTGC
TTCTTAGTATCATCTTCATGAATGGAAATCGGCCAGTGAGGCTGTCATCTGGGAGGTGCTGCGCAA
GTTGGGGCTGCGCCCTGGGATACATCATTCACTCTTTNGGGGACGTGAAGAAGCTCNTCACTGATG
AGTTTTGTGAAGCAAGAANTTACCCTCGGGCCGCTCTAGAAACTAAGTNGGATCCCCCGGGGCTG
CAGGAATTCGATATTCAAGGCCTTATCGGATTACCGTCTNACCCTCGAAGGGGGGGGGGCCCCGG
GTACCC
Sequence 219 cMhvSD031c07a1
AGGTACAGGACACAATGCCCCCAGAAAAGTAACAGCCGTCATTTATGCTAGAAAAGGAAGTGTCC
TCCAGAGCATAGAGAAAATAAGTTCCTCTGTTGATGCAACAACTGTTACTTCACAACAGTGTGTTT
TTAGAGACCAAGAACCAAAGATCCATAATGAGATGGCATCAACATCAGATAAAGGTGCCCAAGGA
AGAAATGACAAGAAAGATTCTCAAGGAAGAAGTAATAAGGCATTACATCTGAAGAGTGATGCTGA
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ACCTCTGGAGAAGGTTTCGATTCCTTTAGCAGTTTGGTAAAGAGCGGTACCT
Sequence 220 cMhvSD032b02a1
CGAGGTACACAAGCTCCTGCATCAGTGCAGGACTCAGTCCCTGAGTGCTGGGCCTGTCACAGACAT
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CCAATTTAACCTGGCCAGGCTGAGCTAGTGGGTCACAAGCTTGAAATCTGAGGTACCTGCCCG
Sequence 221 cMhvSD034b02a1
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ACGTCACCACAAAGACATTTTGGAGTGTTTGGTAAAGGCTGTTTCTTTTCAGTGATTGCTGGAAGC
ANATGGGATCAAATAAAAATAGA
Sequence 222 cMhvSD034d09a1
AGGTACAGAGTGGACCATCTTATGAGGCCAAAAACCCATGAGTTACCAGATGACCATTCAGATAT
TTGGGTTAAACGATGACAGTTTTCTGGTTTAATCAAGGCACTTGCAAAGAGCTATCTTTGACATGA
CATGAAGTCCCTACGTGTTGTTAGCCATTAATGATGGCATGGTTTTTCTATACCAAGCATTCTATAA
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GGTCGGGCCTGGCGTTGGGCGTGCGGCGGGCTGTCTTGCAGCTT
Sequence 223 cMhvSD041c11a1
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GC
Sequence 224 cMhvSD042e09a1
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CTGTATCANNTCATAAGAGGCCTCANAGCCTGNGCANANAGTGAGGATGGGGAGAAGTACAGGG
ATCCANGCCATGGNNANACACCCNGAGTTCTGCCTCCTGGACCCACCCCCGCGTACCT
Sequence 225 cMhvSD042e09a1
ACCTCGAGGGGGGGCCNGGTCCCAGCTTTGTTCCCTTTAATGA
Sequence 226 cMhvSD043b06a1

Table 1

NAATTGGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACGCGGGGACACCAAACAACTCATT
ACACAAAGAGGTAAGGTCCCAGACCACGCCAAAGCTTCCTGAGACCTCTCCTCATCTGTGCATGG
ACGGATGACCAACTCTGGGGCCCAGGCTGTTGCTTCCCAGTATAATGATGAATCCGCCATAGTCTG
GTGAGTGTAGAGGCTGACTCTGGAGCCCAGGCTGTACCT
Sequence 227 cMhvSD043h11a1
GGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACTTGGATTACAGGCGTGGACCAGCATGCC
ATGCCTATAGTGATATCTTTAAGTAACCCTCTCTTTTCTTCTTTTGAGCAATTTTTCAAAGCAACAG
GCATTTTATTAAATAAGAAAGTCGATGTGCTTTCCTAATGCCTGTTAATAAAGTAAGGAGCCAAGG
AACCTCTGTGATTTCAATGAAATCCCTCCAGATATTATAGGCTACTTGTTACTGACAAGTATGGCN
GGAACTGCANGTCAAGCTGTGATAGGCAAATAGATCTTGCTGAAGAGGAAGAATG
Sequence 228 cMhvSD044e12a1
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGCCAGGCGGAAGCC
CGGCTCCGGGCCAGCATCCGAGAGCCCGGACTGGAGAGTCAACTTTTATAACACTGTTACTGGGA
ATACTTGACTTACTAAGCTTTTACTGAACACTTTAATTTTGGGAGTACCT
Sequence 229 cMhvSD044f12a1
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CCAGACAGACGCTCCCATGTGGCTGAATGGGACCCACCCTGCCCTTGGGGATGGCATCACCAACC
ACACTGCCTGTGCCCATTGGAGTGGCAACTGCTGTTTCTGGAAAACAGAGGTGCTGGTGAAGGCCT
GCCCAGGCGGGTACCTGCCCGGGCGGCCGCCCGGCAGGTACTGTTTCTNAACCTGANCTGCATATT
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GCTTGTCAAAATGCCTTTTCCCANATCCATCCCAAGACAACAAATTCATTANTTTTGGGGCAACTT
CCAAAATNTTACTTTTTTNTCAANTCCAANCCCCATTTTNATTTTTATNGAAGANGGCGTTNTAACA
AATTTAAAAA
Sequence 230 cMhvSD044h04a1
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CCAGGTCGGAAGCTGTCTACATGCGGGGATGGACCCTGGCATCCTGGGCTCACAAGGATAGGGCC
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GTACCT
Sequence 231 cMhvSD045c04a1
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CCATNCTCAGTGTCAGTGTCTCCGGTAGAGACAGCCAGGATCACCTGCTCAGGAAATGTACCT
Sequence 232 cMhvSD045c04a1
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CNACTTTTG
Sequence 233 cMhvSD045c12a1
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CCAAGTTTGAAAAAGAAGAACTAGAAAGTCATAGAGCTGTATATATTGGTGTTCACGTCCCGTTTA
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Sequence 234 cMhvSD046e04a1
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GCAGTGCANCGAGGTTATGGAAACCCCATTGAAGCCAGTTCGTATGGGCTGGACCTGAACTGCGG
AGCTCCTGGCACCCCAGAGGCTCATGTCTGTTTTGACCCCTGTCAGAATTACACCCTCCTGGATGA
ACCCTTCCGAANCACAGAGAACTCAGCAGGGTCCCAGGGGTACGATAAAAACATGAGCGGCTGGT
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Sequence 235 cMhvSD046g04a1

Table 1

GGTGGCGGCCGCCCGGGCAGGTACCTCAGAAGCAAACCCAGTTCCTGCACACAGAAACCCCATTC
AGGCTCCTACTGCACTGAGAAGCACGTGTTCTCCATTTCCCTGGGGGAGACCATTGTATTGGGCAG
TTNGGAACAAAACACCATGGACTGGGA
Sequence 236 cMhvSD047e10a1
TTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCACAAAAACCAATCTACCTGATGAAAACTC
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GCGCCCCCCGCGTACCT
Sequence 237 cMhvSD048e11a1
TGGAGCTCCCCGCGGTGGCGGCCGNCNNNCCGGGTNCTCACCAAAATTGGGCCTGAGAAATTTGT
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CTGGGTCCCCAGGGTTCTNCTCATNCTCAGCCCTGTCCCCTNNNATGTGGACACGCANCCACCCTC
AGATGGAGTGGCTCTCTGGGAAAGAATGGAGCTGCTAAACCTGTCTTGGCTCCANCCATGCAGGT
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TTCCAACTCAGGACCTGCTCTGCTTTGACCTCGGCCCTCTANAACTATGGATCCCCCGGCTGCANG
AATTCATTCAACTTATCGATTCCGTCGACNTCNAGGGGGGGCC
Sequence 238 cMhvSD053f10a1
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CCCGGGGCCGGAAGGAATTCNATTTAAAAGCTTATTNGANACCCGCCNANCCTTGAAGGGGGGGG
G
Sequence 239 cMhvSD054a11a1
CGCGGTGGCGGCCGAGGTACAGGAGGCCCGACAATTTGGTGACCAAGTGATGGCAGGCCACTCAG
CTTTGAGTAGCCATGTCCGCCACAGGCCCTGCGGCACATCTCANCTCCCTGGGTGCAGAATTCTGA
CATCATGGCCTTCATGCCCGTGCTCAGTGCGTGGAGCTGTGAGAACATGGAGGGGGGTTGGGCGG
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AGCTCAACTCTGAGGTCCCGCGTCCTGCCGGGCGGCCGCTCTA
Sequence 240 cMhvSD054e05a1
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Sequence 241 cMhvSD054g09a1
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GCCTTCTCAAGAATGCCTGGGACAAGGAGCCAGTGCTGGTCNGTGTCCTTCGTCGTCGGGGGCCTC
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Sequence 242 cMhvSD054g09a1

Table 1

AGTGAACTAACTCACATTAANTTGCNTTGGCGCCTCACTGGCCGCTTTTCAAGTNCNGGNAAACCT
GNTCNTGCCAGGCTGGCANTTAATTGAAATCGGGCCAAACGCCCCCGGGGAGAAGGCGGTTTTGC
GTATTTGGGCGGCTNTTTCCGC
Sequence 243 cMhvSD054h08a1
ACCGCGGTGGCGGCCCGAGGTACATGACGGGATTTCACTATGTTGGCCAGGCTGGTCTCAAATTCC
TGACCTCGTGACCCACGTGCCTTGGCCTGCCAACATGCTGGGATTGCAGGTGTGAGCCACCGCGCC
CGGCCCCAACTTCTCCTAATGTTGCTATTTTGATCTTATTTTTTAAATCATGAATGTTCTCAATGAC
ATCTAGAATGGTGAATCCTTTCCAGTAGGTTTTCAATTATTTTGCCCAGATCCATCAAAGGAATCA
CTTTCTAGAGAAGTTATAGCTTTATGAAATATATTTTTAAGTGATAAAGACTTGAAAGTTGCAATT
ATTCTTTGATCCAAGGGCACCAAGAATGAATGTTGGGTTAGTAGGCATGAAAACAATATTCAGCTC
TTTGTACCTGCCCG
Sequence 244 cMhvSD054h09a1
GGAGCTCCACCGCGGTGGGCGGCCGAGGTACAAGCAGTAATTGATTCACTGGCCTTGGGCTACTT
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AAAAATAATTGTTTAGAACTGGCTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCT
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GCTTC
Sequence 245 cMhvSD055d06a1
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CTACCCCGCCCGGTGGCGGATTCCGGAATTGGTTCAAAAGGCCTTGATCCCGAACACCCAGGACA
GAGACAGAGTACCT
Sequence 246 cMhvSD055d10a1
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CTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTGTATGTTTCCACCTCTTGTGCTG
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Sequence 247 cMhvSD055g05a1
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Sequence 249 cMhvSD059a06a1
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Sequence 250 cMhvSD059b04a1
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GATACCCCAGCT
Sequence 251 cMhvSD059b07a1

Table 1

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C
Sequence 252 cMhvSD059c11a1
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GAACCTGGGTGACAGANTGAGACTCCGTCTCAAAAAAAAAAAAAAATGTTTGGAACTANATGGTGG
TGGTTGTACCT
Sequence 253 cMhvSD059c12a1
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Sequence 254 cMhvSD059d04a1
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Sequence 255 cMhvSD059d06a1
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AATTTCCTTGACACCTGCAGCACTCCAGCCACACGACGGCCTCAGGGCGGTTCCCAGGACACATCA
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Sequence 256 cMhvSD059d10a1
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ATGTGTCCACCTGGATGTTCCGGTTGAAGAGCTAGTGTCTCACCACTCTTCCTGCTATTTGTGAGAG
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Sequence 257 cMhvSD059g02a1
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TGAATATTTTCAGAATGCTGATGTTGAAGCCAGGTTTCACAATCTGGCGGNGCTTTTTCCATTTAGA
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TTTACTGGGTAAGAC
Sequence 258 cMhvSD060a05a1

Table 1

GCGAATTGGAGCTCCACCCGCGGTGGCGGCCCGAGGTACAAGCAGTAATTGATTCACTGGCCTTG
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TTCTTCTCAAATTTAGGCAGCTCATCAAGATTCCACTTCTTTTTAACTAATTTCTCCCCAGGGTTTCC
AAACTTCTTTCCAGATAAGGGCCCTGCCCTACTTCCTCCAAATCGAGGTGCACCAAACCCTCGGTC
C
Sequence 259 cMhvSD061a11a1
AGGTACAGGACATTCCTCTGCTCCTATTGCCCCTGTTTCCGTTCTTTTCACACTGTCTGTGGGTGCT
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CATGATGTGGAACACGTGCTCATCGATGTGGGAACTGGGTACCTGCCCG
Sequence 260 cMhvSD061e08a1
GCGAGGTNCTNTNCGNNGTTNCCACACGCGATGACAGNTCCATGTGTGTTATTGCCCCTGAAGACC
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GGCTAACATGTGTTTTTGTGTCTTAGTTTCAACAAAAAAGTTTAAAAAGTTAAAATACTAAGTTT
ATAAAGTTAAAAAGTTACCCCGCGTACCTGCCCG
Sequence 261 cMhvSD061g11a1
CCGGGCAGGTACTGTCCAACTGGATGCTGCCCTGGTGGCTGAAGGCACACTTCATGATGCTGTCCA
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TGTTCAGCATCATCCGAACACTCTCAGACATCATGGTGATGAATATTTTCAGAATGCTGATGTTGA
AGCCAGGTTTCACAATCTGGCGGTGCTTTTTCCATTTAGAACCATCCAGGGTCACAAGTCCTCGAC
CAACCCAGGATTCAAGGATTTTGTGGCTAACAGCACTTTTGGGATCTTGTCTTTTCAGGAGAATCTT
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ATGGGTATTTTTCCATCAGCTTATGATACCCCTCAAACTCCTTTACTGGGTAAAAC
Sequence 262 cMhvSD061h01a1
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GAAGAAGAATGGCAGAAAGAGGACGTGGCTCGGTCTCCTCGAGGAGGCCTACACCCTGGTTCAGC
ATCAAGTTTCAGAAGGATTAAGTGCCTTGAAGGAGGAATGCANAGCTCTGACAAAGGGCCTGGAA
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Sequence 263 cMhvSD062c05a1
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Sequence 264 cMhvSD062d01a1
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Sequence 265 cMhvSD062e01a1
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AGGGTCAGGGTCATCAGTATCACTGTCTTCCACCTCCACATTTTGTCTCTGGAAGGTCTTCAGGGG
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Sequence 266 cMhvSD062g11a1

Table 1

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GCTTGTACCTGCCCG
Sequence 267 cMhvSD065d05a1
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CACACCACTGCTACTTGGTGTACCTGCCCGGGCGGCCGCCCGGGCAGGTACGCGGGACCCAAAAA
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Sequence 268 cMhvSD067d10a1
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Sequence 271 cMhvSD069g08a1
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Sequence 272 cMhvSD070c02a1
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GCACACAACTCAGC
Sequence 273 cMhvSD070c11a1

Table 1

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Sequence 274 cMhvSD070g09a1
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Sequence 275 cMhvSD071c10a1
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Sequence 276 cMhvSD072d05a1
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Table 1

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Sequence 280 cMhvSD075g12a1
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Sequence 284 cMhvSD076g02a1
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Sequence 285 cMhvSD077a05a1
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Table 1

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CACCTNACTCCCTTTTCTCAAGTAATCAAAGACCAGAAAGGATGTCCTTTACAAAGAGCAGATCC
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Sequence 297 cMhvSD085f07a1
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Table 1

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Sequence 298 cMhvSD086c05a1
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Sequence 300 cMhvSD087e02a1
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GAAAATGGTGAGTGAGTGAGAGTCCCNTGGGATGCATATTTCTGCCACGAACCTTTGAATCCCTGG
GCTCAGGAGATACCCCAGCTGGGGTCTCCAGACCAAAACAGAGACCATGTGGAGTNTGGGTAGAC
CTGCTTCTTAAGTTAGGTGTGGAATCCCAGTNNGCCATTTTGTTCCCCTTGGGTACCTGGCCCCGGG
GCGGCCGTTTNTTANAACTTAGTNGGAATCCCCCCCGGCNTGCAAGGAATTTTCNAATATANAAGC
CTTTATTNGATACCCGGTCGAANCTNGAAGGGGGGGGG
Sequence 301 cMhvSD088b12a1
AGGTACACGTCTCTGTCTGGGCCTCGGCCAGGGTGCCGAGGGCCAGCATGGACACCAGGACCAGG
GCGCAGATCACCTTGTTCTCCATGGGGGCCATTGCCTCCTCTCTGCTCCAAAGGCGACCCCGAGTC
AGGGATCCCCGCGTACCTGCCCG
Sequence 302 cMhvSD088b12a1
GTTAATTGCNCGCTTGGCCGTTAATCAATGGGTCATAAGCTTGTTTTCCTGTGGTGGAAATTGTTAT
CCCGCTCACAAATTTCTCACACCAACNATAACCGAAGGCCGGGGGAGCAATAAAAGTNGTAAAAG
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GCGGCCTTCAACTTGCCCCCGCTTTNTNNCAATTCCGNGGNAAAACCCTTGTTCCGATGGCCCCAG
CCTGGCCAANTTAAAATGNNAAATNNGGCCCAAACNGCCGCCGGNNGNAGGAAGGGCCGGGTTT
TTGCCGGTAATTTGGGGCCGCCTCCTTTNCCGGCTTTTCCCTTCGGTTTCACCTGGACTTCNTNTTG
CGGCTTCGGGTCCCGTTTCCGGCTTG
Sequence 303 cMhvSD088c07a1
AGGTACACTCTTCCTTAAGTCCAGTGGTGCAGGAAAGCTTCAGTTTGTCAATATCACGCAAGACAG
GGACACCAAACACTACCCCTGCCCAAAGGAGCCCCTCACGGACGCCGCCATGTTGTTACCGGACC
CGAGCACCGCTCCCCGCGTACCTGCCCG
Sequence 304 cMhvSD088c12a1
AGGTACGCGGGGACGGTTCGTTTTTCCTTTANTCANGAAGGACGTTGGTGTTGAGGTTAGCATACG
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CCANGCCGTNTGCGAAATCATANTGGCTGTAGTATCCGNTGCTATCCCTGGGGGTTGCAGCTTTGT
ATAAGTTTCGTGTCGGCTGATCAAAGAAAGAAGGCAATACGCANATTTCTACATGAAACTACGAT
GNTCATGAAAGCATTTTGAGCGAGATGANNGAAGNGCTGGGTATCTNTTCAGGAGTGTAAAGGTA
ATCTTNGGGAAATATAAAA
Sequence 305 cMhvSD088f07a1

Table 1

AGGTACAGTGGCCCCCCGTGAAAGACAGAATTGTGGTTTTCCTGGTGTCACGCCCTCCCAGTGTGC
AAATAAGGGCTGCTGTTTCGACGACACCGTTCGTGGGGTCCCCTGGTGCTTCTATCCTAATACCAT
CGACGTCCCTCCAGAAGAGGAGTGTGAATTTTAGACACTTCTGCAGGGATCTGCCTGCATCCTGAC
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ACACGCTTCTGCAGCTGTGCCTCGGCTCACAACACAGAATTGACTGCTCTGGACTTTGAACTACCT
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GAAATTCCGATNTTCAAACTTNATTNGAATACCCGNCTACCTANAAGGNGGGGGGCCCCGGNTNC
CCAAGCCTTTTTT
Sequence 306 cMhvSD088g11a1
GGANATGGGGTTTTGCTGTGTTGCCCAGGCTGGTCTNTAACTCCTGGGCTCAAGCAATCCTCCAGC
CTCGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCACCCGGCCACTTGTTTCTTAATG
AGTGTCTGCAACTGCTGGGGAGGTGCGGGTCTGCCGGCCAGAGCTGCAGGTAAGTGAGGGTCAAG
CTGGTTCACANAGTGCANCAACTCAGCTNANAGTCCTGAACACACAGCCCAGCCCTTTGAAACCA
TCCCCTCCAGCACAAGGAAGACAGCATTNTGCAAACNCATCCATGGGAGCCTCAGGAAAATAAGT
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ACCCCCAANCTTTT
Sequence 307 cMhvSD088g12a1
AGGTACAAAGTGGGAGCTGGCACTGGGCAGATCTGGCTGGATAATGTTCAGTGTCGGGGCACGGA
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CAGAGCTGCTGTGCCCAGTGGTGCTTCAACTGGTATCTATGGGGCCCTAGAGCTCCGGGACAATGA
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GAACTAGGTGGGATCCCCCGGGCCTGGCAAGGGAATTTCGATATCAAAGCCTTTNTCGGATACCC
GGGCGNCCCTCGGAGGGGGGGGGCCCGGGNACCCCCANCTTTTTGG
Sequence 308 cMhvSD090e01a1
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ACCCTGGCCGAGGCCCAGACAGAGACGTGTACCTGCCCG
Sequence 309 cMhvSD090e10a1
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CGCAAAGTTCAGCAATTTTTTGTCCTGCCCG
Sequence 310 cMhvSD090f09a1
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ATTTGGCCCTTTAGAAGAGGATGTCAAGCAGGGAACATTTTCTAAACCAGGAGGTTACCGTCTCTT
TACTCAGAAGCTGCAGGAGCTGAAGAATAAGTACCTGCCCGGGCGGCCGAGGTACCGAGCATGAA
CATCTGCAGCCTCTTGCAGAATCACCCCAGAAGGGGACTGAATCATGGTCCTCTTGATAGGTATGT

Table 1

TCAAGCAGAGTTTCCAGTCCTGAGGTGTATGAGGCCAGCTGGAGCTCATAATCCTTAATTGAATTG
GCGCAAAGTTCANCAATTTTTTGTACCTGCCCGGGCGGCCGCTTCTANAACTAGTGGATCCCCCCG
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Sequence 311 cMhvSD090f12a1
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GGGGTCCCTGATCGCTTCTCTGGCTCCATCCTTGGGAACAAAGCTGCCCTCACCATCACGGGGGCC
CGGGCAGATGATGAATCTGAGTATTACTGTGCGCTGTATATGGGTAGTGGCATTTGGGTGTTCGGC
GGAGGGACCAAGCTGACCGTCCTAGGTCAGCCCAAGGCTGCCCCCTCGGTCACTCTGTTCCCGCCC
TCCTCTGAGGAGCTTCAAGCCAACAAGGCCACACTGGTGTGTCTCATAAGTGACTTCTACCCGGGA
GCCGTGACAAGTGGCCTGGAAGGCAGATAGCAGCCCCGTCAAGGCGGGAGTGGAGACCACCACA
CCCTCCAAACAAAAGCAACAACAAGTACCTGCCCGGGCGGCCGCTCGACCCGGGCAGGTACGCGG
GGGGGCAAAAAAATCAAGGTATTTGGTCCCGGAACAAAGCTTATCATTACAGATAAACAACTTGA
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AGGCTGGGAACATACCTTTTGTCTTTCTTTGGAGAAAATTTTTTCCCCTTGATGTTTATTTAAGNAT
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Sequence 312 cMhvSD091a07a1
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GGACAGCAGGTCACTTCCAGCAAGGTGGAGAAAGCCAATCACACATCAAGAGATGAAGACACTG
CAGTACCT
Sequence 313 cMhvSD093b03a1
CCGGGCAGGTACGCGGGGTAACTTTTTAACTTTATAAACTTAGTATTTTAACTTTTTAAACTTTTTT
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CACTGTCTTCCACCTCCACATTTTGTCTCTGGAAGGTCTTCAGGGGCAATAACACACATGGAGCTG
TCATCGCCTGTGGTAACAACGCAGAGTACCT
Sequence 314 cMhvSD093d07a1
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TCCTGAGACCTCTCCTCATCTGTGCATGGACGGATGACCAACTCTGGGGCCCAGGCTGTTGCTTCC
CAGTATAATGATGAATCCGCCATAGTCTGGTGAGTGTAGAGGCTGACTCTGGAGCCCAAGCTGTAC
CTGCCCG
Sequence 315 cMhvSD094b01a1
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CACTCTTCAGATGTAATGCCTTATTACTTCTTCCTTGAGAATCTTTCTTGTCATTTCTTCCTTGGGCA
CCTTTATCTGATGTTGATGCCATCTCATTATGGATCTTTGGTTCTTGGTCTCTAAAAACACACTGTT
GTGAAGTAACAGTTGTTGCATCAACAGAGGAACTTATTTTCTCTATGCTCTGGAGGACACTTNCTT
TTCTAGCATAAATGACGGCTGTTACTTTTCTGGGGGCATTGTGTNCTGTACCT
Sequence 316 cMhvSD094d05a1
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GGGATTCCCCTGGGTCTGTGCCACTCCTGGGTGAATGGCTGATCTGTCTCACTCTTCTCCGTAATCC
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NAAGGGGGG
Sequence 317 cMhvSD094e07a1
CCGGGCAGGTACCCATGGGAGATGGACTGGCTTGTTCTTTGGGTCAACTGCAGCTTATTGGAGGTG
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GCTACTGGCTTGATAGCTCCGGTGGTGGGCTGGCTAGAGACCCAGGCCAGGAGGACCTGCCCATC
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Table 1

ATTGCCTCATATTTTTTCCCAGGGGAAGAATGATAGCNCTGCCCCCTTTTCTNTTGGGAAGCTNTTG
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CTTTTAAAAAAATATTTTTAATTGGGGTNGAAAACTTTTCTTAATTCTCAAGGAAAACCTTTTGGGN
TNCTTTTAATATAAATTTAATTNATGCTCTTTAAAAATTTCTGTTTGGATNNAAAAGCANTTGGTAT
TATTATTAAAATACCCTGTTAAAAGAAAAAATANTANTTTTTAAAAAT
Sequence 318 cMhvSD095c03a2
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Sequence 319 cMhvSD095c05a2
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TGGATGGTTTAAGGGTTATAGTATTATAGTTTAAATAA
Sequence 320 cMhvSD095c09a2
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AAAACCCCACACACCAAGGGACTAAGATGATGTTATTTCACAGCACTTGCTTGCCTCAGTCTTTAC
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GGGTTTTTTTTTNAGGGGGAAAA
Sequence 321 cMhvSD095d05a2
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TCATCGCCTGTGGTAACAACGCAGAGTACCT
Sequence 322 cMhvSD095f12a2
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ATTTTGTGAAAGNGACCTTTGATATAAGAGGAGCATNACGCGGGGAAAGCTCACATGTCCCGTGG
NTCACACACCAGAAGGTATTTGCGNNTTGTCATTGCTGTCTGGNAGGCCATGGCAATGGCTTTTTT
Sequence 323 cMhvSD095g02a2
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GNANACAGGGTNTTTTAGGAGGTTATTNAGGCTAAATGAANTCTTAAGGGGGGGGCCC
Sequence 324 cMhvSD095h02a2
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Table 1

Sequence 325 cMhvSD003a01
AGGTACTGANANAAAATNTGCTCTGTGGGNNNAGCNTATCCAGTCCACAGCCCCTNTCTTGGTN
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CNACAATCACCTTGACCATCAGNGG
Sequence 326 cMhvSD004c08
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CCTTACCTGTTTCTGCCTCTTTCAATGGTGTTTTTCCATTTTTACAGACTTCTGAAAATTTTAGCTTT
CATTGAAATAAGCTTCCCCATTCCTTCATGTTAATATATCTAGCAATATTGAATAGAAATTATAAAT
GGAAATAAAAATGCTTGCTTTTATAAAATCTCCAGTCTCGCAGCACCCCCAATATAATACAAACAG
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GATTGATGGTANGTTTGTTCATGGAAGATCTTCATCTTATGGGAATTATCTAGTTTTTCTAATCATA
TACTACCAACAAAAATAAACACAAGCGTGTTCCCTTTAATCATATTATCCTCCACCATTACTTCCA
AAAG
Sequence 327 cMhvSD007c03
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GTAATCCACAGGCACAAGACCACCTACTCATTGNGCATNCNCCAAGCTCTCNTGGNCCAGAACAC
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TTNGGCCTTTANTCCAATTACCCTGGCCTTAATCCCTCTGNGGGGGGGG
Sequence 328 cMhvSD009a02
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GGGCGGCCGCTCTAGAACTA
Sequence 329 cMhvSD014h08
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GAAANGGGCACCAGA
Sequence 330 cMhvSD016c06
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Sequence 331 cMhvSD026a03
CGGCGGCCGCCCGGGCAGGTTNACATGGTNCGGCTTNAATACTCCCAGTTNNTGANNCNGCNCAC
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CATCNGACATNNGANGGAGANNAAGGNGCNGNACNAGNCCGCNGAAANAANCATACCCTGAGAA
TNCCNNNCNACCAANAGGNATTTGAGCNGCCTGTTTGATGTAAGAAAAGGA
Sequence 332 cMhvSD027e05
TATCGGCGAATTGTAGCTCCCCGCGGTGGCGGCCGNCCNGCCATGTANGCTNGATANCCTNCAAC
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Table 1

GTNANNTTNAGGAATNCCCTNNTNCNGANTNTTTGCTTCNTNCCACCCCTANGGGGAAANACTGC
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Sequence 333 cMhvSD035a01
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TCCCAATACAACCAGAATTTTGATATTCCTTGNACTGCATGCCT
Sequence 334 cMhvSD036g08
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Sequence 335 cMhvSD037f08
AGGTACCCGGGNACCTGATNCATTTCTACCNNNCTNTAGNAGAANCACATCTTANTGGTGNNATN
CGTCTGTTCTTNCTCACGNATGCCGCCCCNACNAGGCNTGACAGACCATACTAGGCCATANGCANC
GACTTGT
Sequence 336 cMhvSD045f05
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Sequence 337 cMhvSD045g01
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CAGAGTGTACCT
Sequence 338 cMhvSD046e03
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AAAAAT
Sequence 339 cMhvSD048b05
TGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTCTTTTTTTTTTTTTTTTTTTTTTAANA
NCCGCAGNTCNNTNTTATNCCTNCNNAAAAAAAAANNNNTNTNCCTNTNGCCATTNTTTAAAAAAA
CNNTNACNTNTTNTTNNAAAAANANNTTTNNTTTAAAAAANNTNGNNCNAAATNNNNTTTNNGGG
GNAAAAAAAAAAAANNNTTTTTGNNNNCTNNTTTTTTAAAAAAAANNTTTTTTTTTNTNACCCAAA
NGNNGGCGTNTTTANTNTNNCCCCCNTTCNNAATGNNATTTTNAAAAANAGNTATCCCCCGNNNC
NGNNGANNNTNANNNAAAATTTTTNNANCCCCCCCCCN
Sequence 340 cMhvSD048d04
ATCTNCATTAGGGCTATCATTCCTATCCANATTCCCACAGGCTCACAGNTAAGCTACTNCAACAGC
TGTTGCTGACTAAATATNCTCATGTNTCTAAATAATTATNTAAATANGGAACAGNGGATTNATACC
TGATNCCTCTACATTAAAAAAATATTTCTTTCATTATTACATCAANAGTAAAATATATAAAACATTCT
GCCTCAATTTCAAGGTCTTNATTAAGTTGGTACCT
Sequence 341 cMhvSD048e12
AGGTACTTTATTTTTTTTTTTTTTTTTTTTCNNTTTAAAAAAAAAAGGGGGNNNTTTTTTAAAAAA
AANNGGGNNCNNTTNCCAAAAAANNTTNNTGNNTNCCCCCCCCNTTTTCNAANGGGNATTTTNNN
NNNNGGGNNNCCCCCANGNTTTTTTTNTTNGNATTNNNAANNTNGTNTTCCCCCATTNNTTTTTTT
TTTANNNCCCCCTTTTNAAAAAANNNNNNNGNGAANCCNTTTTNNGCCCNNNNNAAAAATTTNAA

Table 1

NNTTTTTAANCCCCTTAAAAAANNCCCCNTTTTNNGGNGNCCNCCTCCCNNTTNNATTTTNAANA
TTTTTTTTTTNAAGGGGGGNGGATTTTTTNNANNNNNNTTNNNCCCCNANNGNCCTTAAANNNNN
NTNNNNTNCCCCCCCCNNTCCCNGGGGGNTTTTTTCAAAAAANTNTTTTTTTTTNANCCNTTTTTG
GGNCCCCGCCCCCCCNNNTNANCCNTTTTTTTTTTTTTTTAAAANTGGNCAAAAANTNACACTNNN
TTTTTTTTNCCAANANANCNATTTGGGGNAACCNCCCCGGGGGCNTAAAGCCCCGGGGGGGNTTT
NNGGCCCCCCNCCCNGGGTTTTTTTTNGGGGGGCCCNNNTCNTTTNAAAAANCCAAAAAAANTT
TTTT

Sequence 342 cMhvSD049c01
ACGAGGTACCGCGGGTCAGGAAGGTGAGGGCGAGACCCCTACCCCCACAGAGAGCAGCAGCCAT
GGGGAAGGGCAAAACCCCAAAACNCTANTGGAAGAAAAGCCCTATCTGTGCCCCGAGTGTGGAG
CCNGCTTCACAGAAGTTCGCAAGNCCCTACTNTTTCNNATAGGGAAGCNTTGNCCACCCCCAGGGT
TGNTCTNCCCTNGNGNAAAAATGGGNGTTCTTGGTAGAAACTCAAGGAGGGCNCCTTCTGCTCTTT
NCTCTCCNGGAAGTAGNNGAAAACCAACTTGGGAATTTTTTTNTGNCCCCNNCAAANAANAANA
AATNNTNTCNNCNGGGGGGNGNANAANGGGGGGANGGGANTTATANCCCCCCTTATTCNANANA
ATTGGGTTANGGCTNGGGNGANGNTTGNGGANGTGGAAAGAATANAAGTANACCCCNCTNGNGN
GAAAAAAAAAATANTTAGGTTNGTCNTTTTTTTACNNTACNANGNTTGTAATTGTAAGGTAAAAA
NCCCCCTTATTTAAAGAAAATTTGGTCTTGGGCTGGGNGGNANAGNCTACCTTTAATTAAANGGGC
CAGTTTNTTAGGAAAAAAAACCTGTGTTGGGTGTTTTAAGAAAAA

Sequence 343 cMhvSD056d03
AGGTACTTTTTTTTTTTTTTTTTTTTTTTTTTNGGAAGGTTCTCAGGTCTTTATTTGCTCTCTCAAATTCC
AGGAATTGACTTATTTAATTAATCCATCAACCTCTCATAGCAAATATTTGAGAAAACAAATTGATA
TTCAGATTCTTATTTTCAGCAGGGAAGTAAGAAGTTGCAGCTCAGTGCACATAAAGTTTGAGACAG
AGATGGAGACATCCAGCCCCACCTNTCTGGAACAAGAAAGATGACTGGGGAGGAAACACAGGTC
ANCATGGGAACAGGGGTCACAGTGGACACAAGGTTGGGCTGTCTCCCCACCTCCTCACATTAGGC
TTACAGGGACGCAGACACATTCAGGTGCCTTTGCANAAAGAGATGCCAGANGCTCTTGAAAGTCA
CAAAGGGGAGGCGTGAAGAAATCCTGCATCTCAGTNCCTTCACAAAGACAACTTGGTTTANGCTTT
TNAAGCTTGTGAGGAGACACACCCNGCGTTACCCTGCCCCGGGCCGGCCGCTTTTAAAAACTAGTG
GGNTCCCCCCGGGCTGCAAGGAATTTCGATNTNAAACTTTATTGATTCCGGNCNACCNTTGANGGG
GGGGGCCCGGGTACCCCAACTTTTTGT

Sequence 344 cMhvSD058h02
AATTGGAGCTCCCCGCGGTGGGCGGCCCGAGGTACTTTTTTTTTTTTTTTTTTTTTTNNCCCNNCNTT
TCCCGGNNAAAAANNNTTGANTTCNNNNTANNNAAANANNACGTTNTTCANNGGGGGAAAAAAA
GGCCNCANNNGGGNGGGNGNNNACNATGNNACCCNNGGGNNTTTNNGGAAGANGGGNGCTCAA
NNACAAANCCNTNNAANNNNGGGGNNNTTTGNNNCCCNAANCNGGGGCNAAAATTGACNCCCN
CNCGGCNGNNGGACTTNCNTTNGGNNAAAAAAAGTTNNANTNTTNNNATACAANTTANAANTTNA
ANGGGTAATAANNGGNTNNNCNNGCCAAANTGAAGACATAAATACATATNCTGTNGGGCAAANC
NTTTTCACCCGNCCTAAGANAACATGCCCCCCCNCAAAANCAATCCCCNAACNTTTCCCNAANCA
AANGGGGGAGCCCNTTAATCCTGTTTTTAACATACNNGCTCANTGACGNGGGTACTAAGGATAGA
NTCCNCCNCCATTGGGTTTGAGCCATAACTGGANTCCCAAAAGGCTTTGGGGTACCNNACCATTTT
TTNAGGGAGGAGGGGANAAATTGNGTGAATTTACCCCATGCCAAAGCTTAANANGGGCCTCGNCT
AAANCCCACNGGCGCCAATNTNCAAAATCNTGGGTTTCCANCCTCACCTNGGAAATGCCCCCCCA
TTGGGAGGANGGGGACNTTNGGAAGANGGACCANGGGGGGATTCTGGAANTANCCCCATGCTTT
NAACAAAGCTNAACTTTTNTCCTTT

Sequence 345 cMhvSD059c01
CCGGGCAGGTACAGTGGCCCCCCGTGAAAGACAGAATTGTGGTTTCCTGGTGTCACGCCCTCCCA
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TACCATTGACGTCCCTCCAGAAGAGGAGTGTGAATTTTAGACACTTCTGCAGTGGATCTGCCTGCA
TCCTGACGCGGNTGCCCGTCCCCCAAGCACCGGTTGAATTAAGTTNCCAGGANCTCGNGCTTGCGC
AACCTANCAACCCGGGAACTNCCTNNANGAACAACGCCTTTTCTGCCAAGCNTGTGGCCCTTCGG
GCTTTCAACAAAACCAACNAGTANTTTGGACNTTGGCTTTCNTGGAACNTATTTGGAACCTTAACC
TTCCATAATAAATTTTGGGGNCCCTTA

Sequence 346 cMhvSD060d09
AGGGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACGCGGGNNACAGANNTNTTNCNANCA
GTTTCTACAAGGCNTGAATCATNGNNNTAAGAANATTGCGANGGGATTACTNACAANAAATTNNN
GTTGACCATCTCNGCAGACACTGGTGTGNGGCGGGAAATTNACCTTTGTTTTTNCTAGCCNCGGC
TNGNNGNGCTNAATCNNCACCTTNGCCCNNGGNTGCTCNTNCNTNCNNNCCGNNACCNCTGGAGG

Table 1

NAAANNGTNNCNTATTCTCAGCNANTTCTGCATGCTCTCCNNAGCCTNCTGCANATTCTAACAAGG
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TTGGATCCANNNNCNGNNATCCTTTTCCAACACATTCCCACCTATTGTGGGAACAGATGGCATTAT
AAGAACATTGTGTTTGATGAAAATC
Sequence 347 cMhvSD060d10
NATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACGGATNCNNCNTGNCCNANGNTGGNN
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CTAAACTGATGGNCTTAATGGGCTAAATNCCNATGNTNAATCCTTATGGATTTTNGGNGCGNTGGG
ATTGTNTGTTGAACTTATTATAAGANAAANGGGCTTCCAAAGTGCGACCACNTACTGTGTTCCCGN
CCTGACAGNNCAATGGCCTAAGCTNNTTTGAAATNTATNAAANGNNCANTNTNTNNANTGNNGAG
CAATGGNTNCTTTCCAGACAGGAAGACTGCTGCTAAGTACCCTCGGC
Sequence 348 cMhvSD061b07
CGAGGTACATGTGNGCCCCCCGTGAAAGACAGAATTGTGGTTTTCCTGGTGTCACGCCCTCCCAGT
GTGCAAATAAGGGCTGCTGTTTCGACNACNCCGTTCGTGGGGTCCCCTGGTGCTTCTATCCTAATA
CCATCGACGTCCCTCCAGAAGAGGAGTGTGAATTTTAGACACTTCTGCAGGGATCTGCCTGCATCC
TGACGCGGTGCCGTCCCCAGCACGGTGATTAGTCCCAGAGCTCGGCTGCCACCTCCACCGGACACC
TCAGACACGCTTCTGCAGCTGTGCCTCGGCTCACAACACAGATTGACTGCTCTGACTTTGACTACT
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TTCCCNCCCCCNGGGGGGGGGGGCAAAAAAAAAAANTTTTGGNCCCTTTANNGNGGGNNTANTGG
NCCNTTTGCNNCCCCNGGGG
Sequence 349 cMhvSD061d01
AATTGGAGCTCCACCCGCGGTGGCGGCNCGAGGTACTTTNTTTTTTTTTTTTTTTTTTTTTTNNNNN
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AAAAAANNNGNNNTTNNAAAGGCNCNACAAANTTTTGGCNCCCNGAGGGGTCCNGTNNGNGNTN
TTCACNCNGGGGNCNCTTTAAAANATTTTTTTTGGGNNNNNCCNNNAAAAACGGGGTTACTANTN
NCCCCCCATAACCTCAACCTTTGGNANTNCAANTGTGCAATGGCTNGNCCTTGNACCCTNGGGGTT
TTTGCCCCTGNCCCNANNGGGCCCTGCCCTAAAAACCNCANNTTATNCCCCCCCCCTNTTTTAANG
GNNCNTCNATNAANGGNACNTTCTTTTNAAAAAATNNNANANNNNNNNNNNNNNNNNNNGNNCC
CCCCCCCCC
Sequence 350 cMhvSD061d05
CGCCCGGGCAGGTACAGTGGTGTGATCTCGGCTCACTGCAACCTCTGCCTCCCGGGTTCGAGTGAT
TCTCCTGCCTCAGCCTTCAGCTTGCACTACCACGCCCAGCTAATTTTTGTATTTTCAGTAGAGATGG
AGTTTCACCATGTTGGCAAAGATGGTCTCTATCTCTTGACCTTGTGATCCACCCGCCTTGGCCTCCC
AAAGTGCTAGGATTACAATATTGGATTTTATGTTAGCACCAGCCTGTCCTTTATTGATCATACCATT
TACCTGGACTCTTTTCTTCAAGAACACAATCTAAGNAATCCTAAACCAGTTTTGACACAAACCATT
GCCTTTAACAACCCATTCATAGTGAGGGGATTTANTGTAGTTTCAATGTCACCATCCAAGATCCCA
CCCCAGTACCTCGGCCGCCCCNGGCAGGTCCCNGGGACAAGGGCNACCCAGCTCTCAAANGAACT
GGNCCAGCTTCCGGATGCCTATTAAAAACAGAAGGAGCNGCTTGNGGNAACAACTAGAANCCCCT
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ANNAGGAAAAAAACTTGGGACCAAAGGNTTTTNGGNAAAACCCCGCTTGGNANTCCNGGNAAAT
AAAGGNGGTTTTNAAACCCCTGGAACNAAAGGCCCGGGANATTCCCCCTCCAAAAANGGAACCTG
GGGGACCAAATTTCTTTTGGAAGGAAAAAAAAA
Sequence 351 cMhvSD062d12
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GGGGGGGGGGGGGGNNCANTTNNGNTNNNNNGGCNCNTNNNNCNNGGGGNNNAAANNANTTNC
CCNTNTTTNTCCTAAAANNNAAAAAANNCAGGNGTNCCCCCCNCCCCCNTTNNTTTNTAAAAAAN
NNNCNTTTTNAAAAAAGGGGNTTNTNTTNNTTNNCNNNANNNNTNAAAANCNNCNGCCCTAAAAN
NANTTTTNNGCNTNGCCCCCTAAAANNNNNTTTTTNTANGNNNAAANCNAGGGCCNNGGCNNAAA
AANAATTTTNNGCCANNAATNNGAAAAANCCTGNTNTTTTTNTTNAGAGGGGAAANTTTCAANCN

Table 1

CNNCTTTTTTAAANAAAAAAAGNTTNGTGGGACANANNTGCCNTNAAAAAAAAACANGATATTTA
TGGGNAGATANTTNACCCCATNANNNCNCCNCTGGGGGGGGTTCATGAANACATCCCNCCCCCNN
TAAAAATAGAAAAAACCCCCCCCTGTCGNGAATTTNTTTTAAANTTTTNNNNCCCCCCCCCCN
Sequence 352 cMhvSD063g04
TGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTNTTTTTTTTTTTTTTTTTTTTNTAATT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTAAAAAAANACNNNNNTTTTTTNNNGACNCANTT
TTTNNNNAAAAAAAAAANACCCTCNNNTTTTTTTTTAANGNCNNCNNNNNNTAAAAAAANTTTTT
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ANACAATNATNNANGNANCNCCCNAAAAAATTTAAAAAAACCCCCCCNTTTTTGGGGANGANNCC
NNNNNTTTTTNTAAAAAANNCACCGGNCACCCCAAANANGNTTNTNTAAAAAAANCCCCNNTTTT
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TTCCNNGNTTNNAAAAAAAAAAAAANCCCCCCCCCNNCGGGAAAAAATTNAAAAANNTTTTTNNC
CCCCCCCCCCCCGGGGGGGGGCCCCCCCCCCNNTTTTTTTTTNTTTTTAAANAANAAAAAAAAACC
C
Sequence 353 cMhvSD074a08
CGANGTACGAGACCTGCTTCTATCTCCTGAAGAAAACTGTGGCNTTCTGGAATGGGAAGATAGGG
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AAATGACAGAATGACATATGAAAAGTTGAGCAGAGCCCTGAGGTANGTTAATAGCATANAATACT
ATGANCCTTCANGAAGAGTTATATACAATGGCTGGCTGTAGAAAATTACACTGTTTTTGCAGGTTT
TTTACTT
Sequence 354 cMhvSD083h08
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CAGGCATGGAGTAAAGCAATTCTATACACAGGATCTCAATCCTAGTCACAAAGACTTCTTAATGAT
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CCAGTGTGCCATGTAGTTATCCTTTATNACCCTCGTAACCATGCCCAT
Sequence 355 cMhvSD085d05
GNTNTCNGGNTTCCNTCTNNCTNAGNNNAAANNNCNCTTNATNCTGTTGANGCAAGAGNGACNGN
ACATNCANCCCTNNCNACCCAGNCTGNNTTTCACTGNANANCAAGGNTGAGGNAGCTTCAGGGCN
ACACTGCGAGTTTCTATGCATGAAATNNTCCTAGCATTTTGCGTTCTCATAACTANAATATGGCTTG
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NCCNNGGGCTGCNTGAATTGAGATNTCAATCTTATCCTTNCCGTACGACCTGGGAGGNGGGGCCC
GGCTACCCAGAATTTTGGTTCCCTTTTACNCGAAGGGTCTAATTGCGCTACTTAGGCCGTAAATCA
ATGNAACATGAGCATGNCTCTCCTGGTGGCGAAAAATTGGAGTATANCCGTATCATCAAATATNTC
ACCACGAACTNTACCGCATCACCTTGGAAGCCATTTATAGCAGTTNAAAGCACTANCGGGNTGCC
CTNAACTNGAAGTTGGAANCTTAAAACTTNACCAATTTNAATTTGGCCGTTTNGGGGCATTAAACC
CGCNCCCCCCCCCCCTACCCCCCGNGAANAAANNCTGNCCCCCCNTTNNCCCCCCTTTNATTTTAN
CTCCCCCCCCCCCCCCCCCCC
Sequence 356 cMhvSD086h05
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CAAGCCCTGAGCTCTGTGATCAAGCTATAGCCTTTTCTGATCCTTTGTCATACTTCACAGATTTATC
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ATTTGGAACAGATCCTCTGCTATCTGCCACTTCCCCTGCAGTTTCCAAAGAAAGCAGTAGGAGAAG
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GCTTTATTTTTTTTTTTTTTTTAAAAGGGAATGTNGNTGGNTTCATTGGNAAAAAAACCTNGTTTTGG
AAAGCCCCACCCNAAAGNAATTTTCCCNNGGGAGGAAAAAAACCNTNANGTGGGTTAAANGGNA
AATTNTTTTGGGGGGGGCCAAAAAAAAAAAANGGGGGTT
Sequence 357 cMhvSD087d02
CGCGTAATACGACTNACTATANGGTNTAANGGNGAANTGCAGCTCCACNGCGGCNGCGGCCCGCC
CGGGCAGGNACNCGNNTTCGTGGCGATANNGGANAGCCCGGTGAAAAGGGGCCNACAGGTCTTN
CTGGCTTAAAGGGACACA
Sequence 358 cMhvSD088e11
CTCCACCGCGGTGGCGGCCCGCCCGGGCAGGTACCGCGGGAAGGGCTGCTGTTTCGACGACACCG
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Table 1

TTTACACACTTCTGCAGGGATCTGCCTGCATCCTGACGCGGTGCCNTCCCCAGCACGGTGATTAGT
NCCANAGCTCGGCTGCCACCTNCACCGGACACCTCATACACGCTTNTGCAGCTGTGCCTNGGCTCA
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ATCCGATACTTGNAAAGAAATACTAATAAACAAAACAGGNTTCCCTTTNGCGCGCTCTTATANACT
NGGNGGGAANCCCCCCGGGGCNTTGGCAGGGGAAATTTNCNAATTATTCAGANGCTTNNATTCTA
ATTNCCCGTCCNCACCTTCCNAAGGGGGGGGGG
Sequence 359 cMhvSD089h07
ATAGCTCCTAATTTAATTATTATAACAAAAATTTACTGAGCATCTACTATGGGCAAACATGGGAAA
TCTAAACATGCNTGAGTCCCAGTCCTAGCTCAGGATGACTTTANAACCTAANGGAAAACATAAAC
ATATACAGAAGGAACGTCAACCCAACATCAGAGTCTTTTTAANGGTTATATANAACATCCTTCAAG
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GGCAGNATTTCCCAATCCCGCTGATCTCCACAACCATAGGAGGGGGCAGCTTCCNTTCCCCCATTC
CATATCAGTCTATTCATACNTTACAAGACAAAAGTNTGATTCCTTCCAANAAANAGTNTGCCANGG
ACCACNCACATACNGGATTTTACAGAATCTTTGAAATCATNTNTTTTCAACATTGTNATCGTTCAG
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Sequence 360 cMhvSD090c07
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ATCCACCAGGGCCACTGGTA
Sequence 361 cMhvSD090c07
AGCAGTATAATCACTGGCCTTCTTTTGGCCAGGGGACCAAGCTGGAGATCAAACGAACTGTGGCT
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TGCCTGCTGAAATAACTTCTATTCCCAAGAGAGGGCCAAAGTTACCTGCCCGGGGCCGGCCGCTCT
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CGACCTCGNAGGGGGGGGGCCCCGG
Sequence 362 cMhvSD092h01
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AGCTTTTCATTTCTAGTAGGTATTTTGGCACATGAGGATTGAATTCCACAGCTCTATGAATGGGCCT
CTACTGGCATTCATCTCTTGCTGGTGCTCAAGCCCCCCGCCGAGAATGCCAGCCCTCAAGGAAGAA
GAAATTTTGTCAAGAAAAACAGCTCTTTGGCTTTTGGAGCCAAAAGCCAGCCTGGTGGTAAGCAAT
ATTTGGTTGGCTTGACCTTTTGGGTAAAGCCTTAATATCAATCAATACCTTTTGGCTTAAAGAACTT
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AAANGGTTTTTCAATTGGGANTATTTGGAACCATACCTCAGAAANGGGGGA
Sequence 363 cMhvSD093g05
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CNGAAAANANGNANTCCCCNAGGGAAAGCCAGGGAACCCNCCCGCTTNNAAAAGCNTTGGGCCT
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NCCTATTTTGGNTTTCTTGTTGAANGTTTCCAAAANCCNTNNCCNNAAAAACTTNTTGGGGGCCAA
AAGTTCACCTNTTANTACAANGCTTGNGGAANCCCCANTNTTNNTCCNCCCCGNTCCGTTTATGNA
GCCCAGNCAATTNAATNNGGGACCTTCCCTTGGGGCTTT
Sequence 364 cMhvSD093g12
TANCGTGGGNGCNGNCGAAGTNCTNNGTTAACTGCCTTTATATCATGCTNAAGTNNAANGCTAATT
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TAATGTCTTCTGGTAGCTCCCACTCATCCCCAGAGTAGCCAAGGTTGAACTTGAACC
Sequence 365 cMhvSD094a09
AGGTACAAATTTGGAAAAAAATGCACACGGGTGGCAGGAAGACAAGCTATGATCTGCTCCAGGCA
TCAAGCTCATTTTATGGATTTCTGTCTTTTAAAACAATCAGATTGCAATAGACGTTCGAAAGGCTTC
ATTTTCTTCTCTTTTTTTTAACCTGCAAACATGCTGATAAAATTTCTTCACATCTCAGCTTACATTTG
GATTCAGAGTTGTTGTCTACGGAGGGNGAGAGCANAAACTCTTAAGAAATCCTTTCTTCTCCCTAA

Table 1

GGGGATGAGGGGATGATCTTTTGTGGTGTCTTGATCAAACTTTATTTTCCTAGAGTTGTGGAATGA
CCAACAGCCCATGCCATTGATGCTGATCAGAGAAAAAACTATTCAATTTCTGCCATTTAGAGACAC
ANTNCNAATGNCTCCCATTCCCCAAAGGGTTCCAAAANGTTTTTCAAAATAAACCTGNNGGCAGCT
TCACCAAANGTTGGGGGGGAAAAGGCATTGAATTAGGTTTGGCANGGTTATGGTAAGGGANAAGG
GGTGAAGAATTTAAAAGAANNTTACNTACNTTTTNAANTTTTTAAAATTTANTTTTAAAGGTCNTA
AAAANTCCCATTNNGAAAAANNTTTTCCCCCNTTTTT
Sequence 366 cMhvSD015e12
GCCCGCCCGGGCAGGTACTTTCATNGNGTTNGNGATGTTNTNNTGNGACAGTGTCTCACTAGNGCA
GTGGCCGCTATCTTGGCTCACTGCAACCTCCTTCTNTTGGGTTCAAGTGATCCTCATGCTTCANAGA
TGGGG
Sequence 367 cMhvSD019e03
CNGGCCANGTACGCAGGGGGCCCCGNCGGNCATCGTTGAGCCCCGC
Sequence 368 cMhvSD026g08
ACGACTNCTATAGGGCGAATTGGAGCTCCCCGCGGTGGCGG
Sequence 369 cMhvSD026h12
CTNCTTAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACAGAACTTAAGACA
CNACTATTNGNTGAGATGAANAAANGCATATATNGGANGCCTTCANAATGAAATGGTCAGAGGGN
GAGTTTACACAGATNGA
Sequence 370 cMhvSD029e08
GCTNTTATAAATGANTAAATANGCTAAGAATAG
Sequence 371 cMhvSD029f06
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Sequence 372 cMhvSD032c10
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AGTCCCCGAGGTGATGATGCTGGAGGCGT
Sequence 373 cMhvSD032f12
GGAGCTCCCCGCGGTGGCGGCCCGAGGTACTTTNTTTT
Sequence 374 cMhvSD040e06
CCGCCGTAATACCGACTCACTATTAGGGCCGAATTGGAGCTCCACCGCGGT
Sequence 375 cMhvSD040e10
CTCCCCGCGGTGGCGGCCGNCNGGCCAGGTACTTTTTTTTTTTTTTT
Sequence 376 cMhvSD041b10
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Sequence 377 cMhvSD048e04
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ATAAAAAATAAACCACACNCAAANAGAGAANGATCTTTATGGATNAAAAAGATAATAATAATGT
GTATTTACTGAATGCCAATTATCTATCCAACCTGGTG
Sequence 378 cMhvSD053g06
AGGGCNAATTGGAGCTCCACCGCGG
Sequence 379 cMhvSD053g08
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CCAGGCTGGAGTGCAGTGGCATGATCTCGGCTCACTGCAAGCTCCGCCTCCTGGGTTCATGCCATT
CTCCTGCCTCACCTCGGAGTAGCTGGGACTACAGGCGTCCGCCACCGCGCCTGGCTCATTTTTTTTG
TATTTTTAGTAGAGACGGGGTTTCACGGTGTTGGCCAGGATGGTCTCGATCTCCTGACCTTGTGATC
CACCCGCCTCGACCTTCAAAGTGCTGGGATTACAGGCGTGAGCCACCGCGCCCAGCCGAGTTCAG
ACTATTTGGNGGGCAACAGCAAGACATGGTTTTTTAGG
Sequence 380 cMhvSD055f02
CCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTGGAGATGGAGTCTTGCA
GTGTTGCCCAGGCTGGAGTGCAGTGGCACGATCTCAGCTCACTGCAAGCTCCACCTCCCGGGCTCA
AGCGATTCTCCTGCTCANCCTCCTGAGTAGCTGGGATTACAGGCGTGCGCCACCACGCCCAGCTCA
TTTTTGTATTTTTAGTAGAGACCGGGTTTCGCCATGTTGGTCAGGCTGGTCTCGAACTCCTGACCTC
GTGATCCGCCTGCCTCGGCCCCGCAAAGTGCTGGGATTACAGACGTGAGCCACCACGCCCAGCTG
GAAGTTAACTTT
Sequence 381 cMhvSD057e05

Table 1

AATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTTTTTTT
Sequence 382 cMhvSD057g11
ATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGG
Sequence 383 cMhvSD058f11
GGAGCTCCCCGCGGTGGCGGCCGNCCNNGCAGGTACTTTT
Sequence 384 cMhvSD063h09
GAGCTCCACCCGCGGTGGGCGGCCGCCCGGGCAGGTACGCGGGGCTTGAACCCGGAGTCAACAGA
GACTCCATCTCAAAAAAAAA
Sequence 385 cMhvSD067b08
CCGGGCNGGTNCTCAGACTACCACANATATTCCCTTACGGNCCAGGTCTCTCATGTTATGCTGTTTT
TTCCAACCTGAGCT
Sequence 386 cMhvSD070d03
CAGAATCCTGGCCAGGNNCCNAGGCTNNTC
Sequence 387 cMhvSD070h05
GGAGCTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTCCTTTTT
TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTCCTTTTTTTTTTTTTTTTTTTTTTTTT
Sequence 388 cMhvSD074e01
TATAGGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTNTTTTTTTTTTTTTTTTTTTCCT
T
Sequence 389 cMhvSD085b12
TGACTTTGATGTGTGACAACAGGCACCANCNATCGCCAACTAGANAAGCTCACCAGANCTCNGAT
GNNGGAAGCTTNTATNGGGGCCTCAGCAT
Sequence 390 cMhvSD086f10
CCGGGCAGGTACAGTGGTGTGATCTCAACTCACTGCAACCCTCTACCTCCTGGGTTCAAGTGATTC
TCCTGCCTCAGCCTCCTGAGCAGCTCANATTATAGGCACCCGCCAACATGCCCGGCTAATTTTNGT
ATTTTTAGTAGAGACGGGGTTTCACCATGTTGGCCAGGCTGGTCTCGAACTCTNGACCTCAGGTGA
TCCACCCGCCCCAGCCTNCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCGCCTGGCCAAAAT
GAAGCATTTTTTTAAACCAAACTGTTTNTTTGCTAGNGTGATCTAGCCATGGNATTCATTCCACTGT
GCTCTATTTCTTT
Sequence 391 cMhvSD090c01
AAGCCTCAAGAGAGCAGACACGTGCTGAAAANNTNCTGNGCAGNCCNGATTNCCCTAAACTNTGG
TNAGTAACAGGTCTGCCTG
Sequence 392 cMhvSD014f05
CGCCCGGGCAGGGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT
Sequence 393 cMhvSD074h03
CGCGGTGGCGGCCCGAGGTACTCGAGCCNNATGGAGTNGNNCNGCNCATCGANCAGACNCACGG
ACGTGTCCCAGGAGGAGACAAGC
Sequence 394 cMhvSD062h08
CGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTTAAAAAANNATTTTTTTTTTNGCCCCNNGG
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TGCCNTANNCNNNNAAAGGGGGGGGNTTNTNNGNCCCCCCCNCCNCCCCCNNNTTNTTTTTTTTT
TTT
Sequence 395 cMhvSC006f04a1
GCTGATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACAAGCAGTAATTGATTCACTGGCCTTGGACT
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TAGTAAAAATAATTGTTTAGAACTGGCTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTC
TTCTGTATGTTTCCACCTCTTGTGCTGTGCGCCTAGCCAAATCANAGTGCTCTTGATAAAAATTCTT
CTCAAATTTAGGCAGCTCATCAAGATTCCACTTCTTTTTAACTAATTTCTCCCCAGGGTTTCCAAAC
TTNTTTCCAGATAAGGGCCCTGCCCTACTTCCTCCAAATCGAGGTGCACCAAACCCTCGGTCC
Sequence 396 cMhvSC008h12a1
CGCCCGGGCAGGTACGCCGGGTGGCGTCACGCCCTCCCAGTGTGCAAATAAGGCTTGTTGTTTCNA
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TGTGAAATTTAAAACCTTNTTGANGGAATTTGCTTCANTCTTGACCCGGTGCCCGCCCCAACACGG
GTGAATAATTCCAAGANGCTCGGNTTGCAACTTCAACCGGAACACCTTAANAACACGCTTNTTCAG
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TAAAAATTAAAAAGAAGAATCGATCCCAAAAAAAAAAAAAAA

Table 1

Sequence 397 cMhvSC008c11a1
CCGGGCAGGTACTACTGCTGAGCTGACTGTCAAACCACAAGATGCAGTCCTTCCCACTCTTCCTCT
CCTTTCCAAAGGCAGAGGAGCCTCATCCCATAGCCGCCACCAGCCCTAGTATGAGGAGTACCTCG
GCG
Sequence 398 cMhvSC007d11a1
AGGTACCAGCTGTAACCAATACGATTCTGGGGCAGGTTGTGGGCGAGTAGAAGAACCTCCTTCCC
CTCTGCGACATTGAATGGCGTGGATTCAATAGTGAGCTTGGCAGTGGTGGGTGGGTTCCAGAAGGT
TAGAAGTGAGGCTGTGAGCAGGACCTCCTTCCAGGGGACATGCAATCTGCAGGGAGGGGCTGAGG
GGGGTCCCATGGTCTCTGCTGTCTTCTCTGTCCGCCTCTTTGTAGAGGAGCTTGAGCTCCAGGAATG
CTCTGGTCAGGGCTGCTGTGACTGTTGGCCCTGCTGTCCTTCCTCCTTCTGTCCCCGCGTACCTGCC
CGGGCGGCCGCTCGAGGGTCTTTGTCTTTCTTGGCCCGACTTTCCAGCGTCCTTCTTCTTCTTGTCGT
CCTTAGGCGGCATTGCGAAGCTCGGAGAATAGCTGCAGACACCGCAGCCTCGTCAAGATGTCGGA
CAAAAAAAAAAA
Sequence 399 cMhvSC008d09a1
TGGAGCTCCACCCGCGGTGGCGGCCGTTAAACATGTGTCACTGGGCAGGCGGTGCCTCTAATACTG
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TTTAACCTTTNCTTTATGAACCATCCCTGTGTTGGGGTGAAAGTGAGGGTAAATAATGACTTGGTG
GGTGAATTGGAAAAATTGGGCTGGTAAATGNCAAGTCANTGGTTTAATCTGACCCCAGCTTATGCC
GGAGGAAAAAATGGTTTCAATGTTACTTATCCAACATTAATTCTTCTATTAGGGNGAANAGAATTG
GTCCCAATTGGGTGGTGAAGGAGGTCAATTATATGGTTNGGGAATTT
Sequence 400 cMhvSC008c05a1
AGGTACAACGCAGAGCAGGTCCTGAGTTGGGAGCCAGTGGCCCTGAGCAATAGCACGAGGCCTGT
TGTCTACCAAGTGCAGTTTAAATACACCGACAGTAAATGGTTCACGGCCGAGGTACTTGTTGTTGC
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TCCTCAGAGGAGGGCGGGAACAAGAGTGACCGAGGGGGCACCTTGGGCTGACCTAGGACGGTCA
AGCTTGGTCCCTTCCGCCGAACACCCAATTGGTGTCGGC
Sequence 401 cMhvSC008f05a1
AGGTACAGCAAAAACCCACCTGTGTAAACACACACAGCAAAGTGATGTAAGAAGTTTCCATATAA
AGGGCTGCAGTATGGGAGAGGTAATGTGCAGGCTGGTTGCGGTTGTAGGGGCCCACCTTACTGAA
CTTTTCCATGATATGGGACCTGCCCGGCCGGGCCGTCTA
Sequence 402 cMhvSC008h03a1
GAGCTCCCCGCGGTGGCGGCCGAGGTACACCAATTGAGGAGAGACACATGGGTGGGAAATTGCAA
TAAAAAGACGGCCCATAGCAGGCTGCATTCCCATGGCTGGCCAGAGGAGGAACGCTTTGTGTTCT
CATCGGAGCTGCATGGGAAGTCTGCATACAGCAAAGTGACCTGCATGCCTCACCTTATGGAAAGG
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GCACCCCANAGGCTCATGTCTGTTTTGACCCCTGTCAGAATTACACCCTCCTGGATGAACCCTTCC
GAAGCACANAGAACTCANCAGGGTCCCAGGGGTGCGATAAAAACATGAGCGGCTGGTACCTGCCC
G
Sequence 403 cMhvSC008f12a1
GGACCGAGGGTTTGGTGCACCTCGATTTGGAGGAAGTAGGGCAGGCCCTTATCTGGAAAGAAGTT
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GGATN
Sequence 404 cMhvSC006f03a1
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TCACCNNCAAGGGTAAACGATNAAATTGAACCACCTGGTAGGNGTTATATTAACANATGATACTT
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NCGCCCGGGCAGGTACTTCACTGGAAATATGGGCGCCNAGGTGGCCTTCAACTGGATCATTGTTCA
CATGGAANANCCANATTTTGCTNAACCCACTNACCATGCCTGGTTATGGAAGGGCATCTTCTGCTN

Table 1

GANCCTCTATTTNTGNTGCTTCTTGGACTGAATAACCAACCTCCAAAAAAAAATCTANCTATCATC
ACCTCCANTGGAATTTCANCNAAATCNAGCTATTTCAAAGCACTACCANCAACAAATAATAACCT
ACAAAAAAACACTTNCATNNGNATCTTTANCCACCCCTAAATT
Sequence 405 cMhvSC008d04a1
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GTAGCTCCATCGCATTTTATGTTTCTGGCGAGAAGGGAACGGAGTTTTCATCAGGTAGATTGGTTT
TGT
Sequence 406 cMhvSC009b06a1
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CGTGCCACAGAATGTGGCCGTGGTGACACCATTGCAAATCCCCTCCTTGCACATTCCGAAGTCTGC
CAGTTTACAGTGACCCTCGTGGTCCAACAGGACATTGTCCAGTTTCAGATCTCTCATACTCAGCCT
ATACCCCATCCTCCACTCTAGCACCCATCTCTACCCATCAGAGTCAGAATGAACACCCATAGGGGA
GGTGGCCACTGTGTGCCCCCCCGCGTACCTGCCCG
Sequence 407 cMhvSC009h03a1
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GGACCAGCAGGACCCACGGAGCCAGGAGCACCTT
Sequence 408 cMhvSC009h03a1
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AGGGTGCCGAGGGCCAGCATGGACACCAGGACCAGGGCGCAGATCACCTTGTTCTCCATGGTGGC
CATTGCCTCCTCTCTGCTCCAAAGGCGACCCCGAGTCAGGGATCCCCGCGTACCTGCCCG
Sequence 409 cMhvSC010e11a1
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GTGAGTTTTGGGCAATGTGTTCCTCCCATTTGTTCAGCATCATCCGAACACTCTCAGACATCATGGT
GATGAATATTTTCAGAATGCTGATGTTGAAGCCAGGTTTCACAATCTGGCGGTACCT
Sequence 410 cMhvSC016e09a1
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CCTAGCCAAATCAGGGTGCTCTTGATAAAAATTCTTCTCAAATTTAGGCAGCTCATCAAGATTCCA
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CTCCAAATC
Sequence 411 cMhvSC016b09a1
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GGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTGTATGTTTCCACCTCTTGTGCTGTGCG
CCTAGCCAAATCAGGGTGCTCTTGATAAAAATTCTTCTCAAATTTAGGCAGCTCATCAAGATTCCA
CTTCTTTTTAACTAATTTCTCCCCAGGGTTTCCAAACTTCTTTCCAGATAAGGGCCCTGCCCTACTTC
CTC
Sequence 412 cMhvSC014g04a1
GGACCGAGGGTTTGGTGCACCTCGATTTGGAGGAAGTAGGGCAGGGCCCTTATCTGGAAAGAAGT
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CAAGTAGTCCAAGGCCAGTGAATC
Sequence 413 cMhvSC027b01a1
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ACAGTCACCTTGACCATCAGTGGGGCCCACGTTGAGGATGAGGCTGACTATTACTGTTACTGTGCG
GCCGCGGTCTCGGTCACTCGAATAACCCGACATGGCGTCAATGGTTGCGGTTGGCGGGGAACGAA
GTATATAGAAAAGCGTGCGACAAGTCGCTGGAAATGGCCTCGATGACGGCGAAGCCTTGCGGGGG
CGGCAGCGGAGGAA
Sequence 414 cMhvSC028f01a1
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Table 1

TCCAACAGGACATTGTCCAGTTTCAGATCTCTCATACTCAGCCTATACCCCATCCTCCACTCTAGCA
CCCATCTCTACCCATCAGAGTCAGAATGAACACCCATAGGGGAGGTGGCCACTGTGTGC
Sequence 415 cMhvSC040c11a1
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CTCCAGCTCACGGACCACAGTCACCTTGACCATCAGCGGGGCCCACGTTGAAGATGAGGCTGACT
ATTACTGTTACTCTGAGGCTGACAACAATAGGGTGTTCGGCGGGGGGACCAAGCTGACCGTCCTA
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CAAGGCCACACTGGTGTGTCTCATAAGTGACTTCTACCCGGGAGCCGTGACAGTGGCCTGGAAGG
CAGATAGCAACCCCGTCAAGGCGGGAGTGGAGACCACCACACCC
Sequence 416 cMhvSC033e12a1
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ACGTCACCTGCTGACTAAAGATCCCTTGGGCCTTGAATAACCAGCAGCAATATCCAAGTAGTATAC
CATGGGCCTTGGGTGAAACTCTGAGACTTTCTGGCTCCAGGTGAAACCCAGCATATTGCCAGCTGT
GGTGGCTATAGTGAGAGACTTCTTCTGCTTGAGAAAAGCTGAAGGAAAAATAAAGCAGTATTTGC
CTTGTACCTGCCCG
Sequence 417 cMhvSC033a02a1
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AAGACGGACCCCGCGATGAGGGCGGCGGCAAGGAGCACCTTCATGTTNGGTTCGGNAAGGCGCA
GCATCCCCGCGTACCT
Sequence 418 cMhvSC032f05a1
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ACAGAAGTTTCTAAATATGTCATATAATTCCCACACGAGCGGCCGCCCGGGCAGGTACTTGTTGTT
GCTTTGTTTGGAGGGTGTGGTGGTCTCCACTCCCGCCTTGACGGGGCTACTATCTGCCTTCCAGGCC
ACTGTCACGGCTCCCGGGTAGAAGTCACTTATGAGACACACCANTGTGGCCTTGTTGGCTTGAAGC
TCCTCA
Sequence 419 cMhvSC031h07a1
CGAGATACTGTCCAACTGGATGCTGCCCTGGTGGCTGAAGGCACACTTCATGATGCTGTCCAGGGT
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CAGCATCATCCGAACACTCTCAGACATCATGGTGATGAATATTTTCAGAATGCTGATGTTGAAGCC
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CCAGGATTCAAGGATTTTGTGGCTAACAGCACTTTTGGGATCTTGTCTTTTCAGGAGAATCTTGGC
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GGTATTTTTCCATCAGCTTATGATACACCTCAAACTCCTTTACTGGGTAAAACTCCTTGTGGCCATA
GAACCAGTGGGCAGGGGGTGCAGGAAACAGGTGCAGGGCTCTGATCATCCATCTCCTCCTCTGGT
ACCTGCCCGGGCGGNCCGCTCTAGAACTAGTGGGATCCCCCGGG
Sequence 420 cMhvSC031g07a1
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GCTGCCTAAATTTGAGAAGAATTTTTATCAAGAGCACCCTGATTTGGCTAGGCGCACAGCACAAGA
GGTGGAAACATACAGAAGAAGCAAGGAAATTACAGTTAGAGGTCACAACTGCCCGAAGCCAGTTC
TAAACAATTATTTTTACTAAAATGCATAATTATGTGATAGTTATACATATACCAACCTGTTATGTGA
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Sequence 421 cMhvSC031c09a1
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GTGGAAACATACANAAGAAGCAAGGAAATTCAGTTATGAGGTCACAACTGCCCGAAGCCAGTTCT
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GACAAGCTGACCTGCAAGTAGTCCAAGGCCAGTGAATCAATTACTGCTTGTACCTCGGC
Sequence 422 cMhvSC031b07a1

Table 1

CCGCGGTGGCGGCCCGCCCGGGCAGGTACTGTCCAACTGGATGCTGCCCTGGTGGCTGAAGGCAC
ACTTCATGATGCTGTCCAGGGTCATCAGGGAGACATGTTGAAAGAGCTCCAGACGTGAGTTTTGGG
CAATGTGTTCCTCCCATTTGTTCAGCATCATCCGAACACTCTTAGACATCATGGTGATGAATATTTT
CAGAATGCTGATGTTGAAGCCAGGTTTCACAATCTGGCGGTGCTTTTTCCATTTAGAACCATCCAG
GGTCACAAGTCCTCGACCAACCCAGGATTCAAGGATTTTGTGGCTAACAGCACTTTTGGGATCTTG
TCTTTTCAGGAGAATCTTGACATAGTCTGGGTCATGGATATTGAAAGAACATCGTAAAGGGTCCAA
CCCACAAGGGAACGGCACATGGGTATTTTTCCATCAGCTCAGGATACACCTNAAACTCTTTTACTG
GGTAAGACTCCTTGGGGCCATAAACCAGTGCGCAGGGGGGTGCAGGGAAACCAGGTGCATGGCTT
CTGANCGGCCATCTCCTCCTCTGGTACCTTCGGGGCGCTTCTAGAACTAGTGGGATCCCCCGG
Sequence 423 cMhvSC031a08a1
GCAGGTACAGCCTGGGCTCCAGAGTCAGCCTCTACACTCACCAGACTATGGCGGATTCATCATTAT
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CAGGANGCTTTGGCCGTGGTCTGGGACCTTACCTCTTTGTGTAATGAGTTGTTTGGTGTGAGGCCC
AGATNACAAGGGCCCCCNCNTACCTCGNN
Sequence 424 cMhvSC026c02a1
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GAGACCCAGCCTGGCAGGCATGTGTCCTGGGCTGTCTGTGGACCTGGAGCCTGCTGTCATAGGTTG
GCATCAACTACCAGTCCCCCACAGTGGTGCCCGGGGGTGCTGTAGCCAAGGTGCAGCGGGCAGTC
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AGAAAAAAG
Sequence 425 cMhvSC023f07a1
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GGTGTATCCTGAGCTGATGGAAAATACCTATGTGCCGTTCCCTTGTGGGTTGGACCCTTTACGATG
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Sequence 426 cMhvSC023c06a1
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CCTAACACTTTGGACATCAGACAGTGCANGAGAAAGAATGTGATGCGGCAGAAGGGGCTGAAAA
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Sequence 427 cMhvSC025f05a1
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CCCGCGTACCTCGGCCGCCCGGGCAGGTACAAGCTTACAAAACTCAGACCACTCACCAGAAAAAA
ATCGGCATTTATATAGTTGTGTTACTTTTGGTTTCCTGCATCTTTTCACATCTGGCTCATTTACATCA
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TGTTATAATCTTGAAAGTGAATTTCTTTGGACCCTCCCTTGAATGCAGTTATACCTAGTAAACCTGA
TCCACAACCAAGATCCAAGACTTTTTCCCAGCAAATTTCACTTTGGCCTTTGTGAAATAAAGCCA
GGAGGGNAAAAGGGTCCT
Sequence 428 cMhvSC025a04a1
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GGCTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTGTATGTTTCCACCTCTTGTGC
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Table 1

ATTCCACTTCTTTTAACTAATTTCTCCCCAGGGTTTCCAAACTTCTTTCCAGATAAGGGCCCTGCC
CTACTTCCTCCAAATCGAGGTGCACCAAACCCTCGGTCC
Sequence 429 cMhvSC034e05a1
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CACCCCAGAAAGTGAACTCTCAGTCTTCCCAGCCAGTCTCTTTCTTATCATAGGTTAGCTTGCTTAT
TCTGGAATTTCGCGTATACAGATGCATGCCATGCCATAGGTACCTGCCCG
Sequence 430 cMhvSC030g10a1
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TTATTCCTAGAACCAGGCGACCTGCGACTCCTTGACGTTGACAATCGAGTAGTACCTGCCCGGGCG
GCCGCCCGGGCAGGTACTCTTGCTGCTTGGTTGATTAATAAAGCGGGACGTCCCTTTGAGCAGCCT
CAAGAATATGATGACCCTAATGCAACAATATCTAACATACTATCCGAGCTTCGGTCATTTGGAAGA
ACTGCAGATTTTCCTCCTTCAAAATTAAAGTCAGGTTATGGAGAACATGTATGCTATGTTCTTGATT
GCTTCGCTGAAGAAGCATTGAAATATATTGGTTTCACCTGGAAAAGGCCAATATACCCAGTAGAA
GAATTAGAAGAAGAAAGCGTTGCAGAAGATGATGCAGAATTAACATTAAATAAAGTGGATGAAG
AATTTGTGGAAGAAGAGACAGATNATGAAGAAAACTTTATTGATCTCAACGTTTTTA
Sequence 431 cMhvSC022e05a1
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AATCTGGTGGGTAAACAAGCTCCTTAAACTCATCCACCAAGGAGCCCAGTCTTTTATTCATTGCTT
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CAAACTCGCATTCATGGCTTGGTTTCCCAGAAGATCTCCATTTAACTTTTTTAAAGAAAGTTTATTG
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NGCATGACAATCGGAGGACTCGAGGGGGAT
Sequence 432 cMhvSC022d03a1
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GAATGAGACTGCAGATCAGTATTAAAGAAGCTGGATGAACAGTACCTCGGCCGGCTGTTATGTTC
ATCATGGCACTTAAGAGATGCTTAACAAACCTTTCCTACAATGTTCCTCAGATTTTCAGAGCTTATT
TGATCTAGCATCTGGTTCCTAAATTCTGAGTCACATCAGAAGCCAAACTTGAATGCTTTTGGAAAG
AGCTAGCCTCATACCACTTCAGTTGGGAAGGGGAGTACCT
Sequence 433 cMhvSC027c04a1
GGAGCTCCCCCGCGGTGGCGGCCGAGGTACTGTCCAACTGGATGCTGCCCTGGTGGCTGAAGGCA
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TCAGAATGCTGATGTTGAAGCCAGGTTTCACAATCTGGCGGTGCTTTTTCCATTTAGAACCATCCA
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NCCCACAGCGGGAAACAGCACATGGGTATTTTTNCATCAGCTTATGATACACCTTCAAACTNCTTT
ACTGGGTAAAACC
Sequence 434 cMhvSC027e11a1
CCGCGGTGGCGGCCGAGGTACCAAAAAGACTCTCAAAAACCAATACTCCCACGGGCAAGGGAATA
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CAGGGAAGGTGAACTTGCCCAGGCAGATGCGATAGACAGCGCTCAGAGGAATCCGCTTGCAGCTG
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ACCTCNAGGGGGGGC
Sequence 435 cMhvSC027e09a1
CGCGGTGGCGGCCCGCCCGGGCAGGTACAGGGCAGTAATTGATTCACTGGCCTTGGACTACTTGC
AGGTCAGCTTGTCTCACATAACAGGTTGGTATATGTATAACTATCACATAATTATGCATTTTAGTA

Table 1

AAAATAATTGTTTAGAACTGGCTTCGGGCAGTTGTGACCTCTAACTGTAATTTCCTTGCTTCTTCTG
TATGTTTCCACCTCTTGTGCTGTGCGCCTAGCCAAATCAGGGTGCTCTTGATAAAAATTCTTCTCAA
ATTTAGGCAGCTCATCAAGATTCCACTTCTTTTAACTAATTTCTCCCCAGGGTTTCCAAACTTCTTT
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Sequence 436 cMhvSC037e10a1
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TTCCTCCCATTTGTTCAGCATCATCCGAACACTCTTAGACATCATGGTGATGAATATTTTCAGAATG
CTGATGTTGAAGCCAGGTTTCACAATCTGGCGGTGCTTTTTCCATTTAGAACCATCCANGGTCACA
AGTCCTCGACCAACCCANGATTCAAGGATTTTGTGGCTAACAGCACTTTTGGGATCTTGTCTTTTCA
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GGAACGGCACATAGGTATTTTTCCAT
Sequence 437 cMhvSC037f08a1
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Sequence 438 cMhvSC037e07a1
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Sequence 439 cMhvSC038b12a1
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Sequence 440 cMhvSC038b12a1
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Sequence 441 cMhvSC038g09a1
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Sequence 442 cMhvSC038a03a1
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Sequence 443 cMhvSC038d02a1
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AGGCGACCCCGAGTCAGGGATCCCCGCGTACCTGCCCGGGCGGCCNGTTNNAAAAACTANTGGAT
CCCCCGGGCNTGCAGGA
Sequence 444 cMhvSC039b01a1
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Sequence 445 cMhvSC038h11a1
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CCTGCCCG

Table 1

Sequence 446 cMhvSC038h11a1
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Sequence 447 cMhvSC038h11a1
ATTGCNCGCTTGGGCGTAAATCATGGGTCAT
Sequence 448 cMhvSC038h11a1
CGCTCCACAAATTTCCACACCAACATACCGAANCCGGGGGAGCCANTAAAAAGTTNTTAAAAGCC
CTGGG
Sequence 449 cMhvSC038d08a1
ACTATAGGGCGAATTGGAGCTCNCCGCGGTGGCGGCCGCCCGGGCAGGTACCCAATAGTGGATGG
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CCAGAATCAGTGGAAGCAAGCTGGCAGCGATCGACCCTTCACCCTTGACGATTTACAGTACCTCGG
CCGCTNTTAAAACTAGTTGNATNCCCCCGGGCCTGCANGGAATTCCGATATCAAAGCTTTATCGAT
ACCGTC
Sequence 450 cMhvSC038g06a1
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TGTGATGGATGATNNNNATGAANTAAGGGACCGAGCCACCTTCCACCTAAATGTCCTGGAGCAGA
AGCAGAAAGCCCCNTTAATTCNAGGCTTNTATCCTAAAATGGTCTGACTGTTGTCCATCCCTGGTC
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CCTGGTCATNCTGTTAGAGTACCTTTGGCCGNTCTANAACTAGTGGGATCCCCCGG
Sequence 451 cMhvSC038g05a1
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GCTTACCCCACTTTNTCCNATGGC
Sequence 452 cMhvSC038g05a1
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Sequence 453 cMhvSC038g05a1
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Sequence 454 cMhvSC038f05a1
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GTCCCTGAAAAGAAGGGCAGGTTGGGANAGGTNCCCCTNGTNNCNTTTAANAAAAAAGGCCCCC
CAGGTGGGCCAAAANAAGCCACCNANTTNAAANGTAGGGGAATTGAATCNATATAAAAAAAAAC
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CCCAACCCAAGAAAAA
Sequence 455 cMhvSC021g12a1
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ACAGCACAAGAGGTGGAAACATACAGAAGAAGCAAGGAAATTACAGTTAGAGGTCACAACTGCC
CGAAGCCAGTTCTAAACAATTATTTTTACTAAAATGCATAATTATGTGATAGTTATACATATACCA
ACCTGTTATGTGAGACAAGCTGACCTGCAAGTAGTCCAANGCCAGTGAATCAATTACTGCTTGTCC
TCGGCCGCTCTAGAACTAAGTGGATC
Sequence 456 cMhvSC021f11a1
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ACCTCCTCCCCGCGTACCTCGGCCGCTCTAGAACTAGTG
Sequence 457 cMhvSC021f08a1
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Sequence 458 cMhvSC021a08a1

Table 1

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GGCATTTTCCGTGTGACCGTGCAGGTGGACAACAGTCTGGGTTCTGACAGCGCCGTNCTGTACCTT
CGGC
Sequence 459 cMhvSC021a08a1
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TTAG
Sequence 460 cMhvSC021f07a1
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TCTTTTCCAGCAGGGCCAGANGGACCAGCAGGGCCCCTAGGACCAGCAGGACCCACGGAGCCAGG
AGCACCTT
Sequence 461 cMhvSC021f07a1
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Sequence 462 cMhvSC017a08a2
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Sequence 463 cMhvSC018f05a2
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Sequence 464 cMhvSC018d07a2
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Sequence 465 cMhvSC018c08a2
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Sequence 466 cMhvSC036d11a2
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CCTCCGCAGCGACT
Sequence 467 cMhvSC019a09a3
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Table 1

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Sequence 468 cMhvSC020b11a3
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CTGCCCGGGCCGGCCGCTCGAAGGTACGCGGGTGAAGAAAAGGCTCTAACATGAGTTTGATCTTG
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Sequence 469 cMhvSC029b09a2
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Sequence 471 cMhvSC020b10a3
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Sequence 472 cMhvSC012h12a2
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CATCCTCAGTGTCAGTGTCTCCGGGAGAGACAGCCAGGATCACCTGCTCAGGAAATGTACCTCGGC
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TGTTGTAGCTGCCGCT
Sequence 473 cMhvSC001g01a2
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Sequence 474 cMhvSC035h10a2
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TGCAAGTAGTCCAAGGCCAGTGAATCAATTACTGCTTGTACCT
Sequence 475 cMhvSC035c03a2
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Table 1

TCAATCTGTGTGATTCATTAAATTGGACCATTGATGATAAGAATACACATTGTATGTTTCTGTGCAC
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Sequence 476 cMhvSC001e01
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AGCCCCCTGGGCACCAGTAGCAAGTCTGGGCCTCTGGAACTTCTTTTTTTGCAGAGATGGGGTCTC
ACTATATTGCCCAGACTGGGGGCTCA
Sequence 477 cMhvSC006b01
CACCGCCGGTGGCCGCCGGCTTGTTATTGCTCATCATGGCACTTAAANAGATGCTTAACAAACCTT
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Sequence 478 cMhvSC010d11
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Sequence 479 cMhvSC010d11
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Sequence 480 cMhvSC010h12
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Sequence 481 cMhvSC011h06
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Sequence 482 cMhvSC012a10
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TNTTGTTCCCAGA
Sequence 483 cMhvSC012b02
CCGGGCAGGTACNCCATTGAGNGCTNTNNTNCCTTAGCNACNAGGNNGNNNCTGGNNANNNGAA
ANNTCACTAAANTGNANTTANNANTNNAGNNNAACNNGNNNNTNNTGTNNNTCATNCATGAANN

Table 1

TTNCANCTNTTANNCTNTTNTGNNNGGNCTGCCCNTTNTTCTANACGTGGATGGTGGAATAACCAT
TGATCTGAGCNAACCTTTATTGTGANCAACTANTGAANAAGGNCAANCNTGTCTTANTANNNNGA
NGGAANAGCTNCATCTCNACANCNAAACAAACCATCAAGGTTTGCCACTTGTTGAAATTTGNNGC
CACAACTNCNGACTACACTGACTTGACAATTAAACCCACTCCCCTTTTNAAGGGTTTCCTTCCGNT
AAAAGATTGGGAAGANGGCCATATTATNCAACAAACTCATTANATCCCCGTNACAGTACGAGTAN
NCTATATGNAAACTACCANTTGGGCTTTGATTTTNATTCGTAACGCATTGCTTTTTTTTNTGNANCA
NTNNTACACTNCATTTTTTAAGAATTCAANTNTTTAAAAATTNGTTTGCTTTTCCTTAANGAAATTC
ATCCNGGCCAAGGAATAAGGGGGGGNGTTTTANTNGGAATTNTAAGGGCCAAAGGNTTNCNCCCC
NCAATAAAAATTGNTTGCTACAAACTTNACNNCAANAAAAAGAGTTTTGGGNNCNTTTNTNCCCC
AAAAAAATNNAAACNTCCAACCNANNNATTCNTAANCTCGNNTTTNNAANGTNCTAACAANTTTT
AGGGANTTTTTTTTTT

Sequence 484 cMhvSC012b04
AGGNNCCCNTATTNGNNTTTTGNNANACANTCCATGGANAAACNGGTGGAGCTGCNCCNAGGCN
CTGANCNTGNCNCCCTCTACTGNANTAACTNTANNCACGACTNNTACTTACTCTGNGCTNGNNGTG
ANAAGGGNACNTGNCCGGGCGGCCGACGTACNGGTGCTCTCCAGGCTGGCAGCCCGCTGCCTA

Sequence 485 cMhvSC012f09
ACGNGCCNGGNACAGTGGNANGANNANGGCCCNCNNTNNNATTTNCCTNNCNGGCCTAAGNNAN
TNTNTNACTTGCAGCCTCCCAATTATCTGGGACTACNGGCGCATGCAACCATACNTGGNTAATTCN
TGTATNTNTTGTGGAGACAGCATGTGGCTGTCTCTACATANCTCATGNTGTCCGCCCAGGCACAGT
GATTAAACTCCCNGGCTCANGTGATCCTNCTGCCTGGGCNTGNNAANNTGCTNGGATTACAGGCA
TATGCCAGCNTGNNCTGNCTTTCCTGTATTTNGTAATNTAGGAANTGGGAGTTCATGNTGGGAGGC
ACATTNCCTATAGGACTCCNGNNCAACCTACGNTGAAAATANGTATTCCTANAAAANGGNTTNTA
CNNACTNATATTACGGGGCACCANTATTGNTATCAACCTGAGAATGCTTTTTACATTATTTNGAGN
AGAACCTACGTGTNATTCANATAGTAAAAACTCAAACCCTAAANCNGAGTGAGAGCANCNTANGN
TTCANGTTTTCTAATATCCTTAAGATTTTCCTTTGCTTCC

Sequence 486 cMhvSC014d02
CCGGGCAGGTACTTGNGGAANTCATGCCTGGAAGGGGCTTGGGCACNTNANTAAGNCNGCCNTNN
TTTNGNTAAAAGGAGGGAAAAATCTACTTGAATTGACTTACCANANGCTTGATAACAGAGATGNC
TAGGATTAAAATCCNGATANTGACAAATCCACCCNNAAATCCCATCTTCTANTNTNATGNCCCCCC
GCCTNCCTGANTCGCTNTNNAACNNNATGGATNCCCCGGGNTCTAGGAANGGGNNNTNAAGCNNA
TCTATNCCNNCCNNCTCTGANGGGGGGCCCNGCACCCAGCTTTTAGTNNCCTTNNATAGGGGNTTA
ATGNGCGCGCTTGGCGTAATCATGGT

Sequence 487 cMhvSC016e01
GCTCCACCCCCGGTGGCGGCCACAGGAGCACATNTCCCTCTTCTNNAGGTGTGTCCCTCAGCATGA
CGCTGACTGATGTGNCATAAAGACTGACTNGTGACACTGGCTAGTGCTNNCNAGCCATCTAGACT
ACAACTTATTCTAGATACACCCTGGAGAGATCTTAAAGNGCATATCTNNTTCACCCANAGAAGGC
ATTTATGCCTT

Sequence 488 cMhvSC017a07
ATTGGAGCTCCCCGCGGTGGCGGCCGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTNGNAAAA
NNGGGGGGNAAAAANTCCCCNANTNNNTTTANTTTTTTNAANCCNNNCTTNAAAANNCCCCCNNN
NNGGGGNNNNCNGGGGGGGAAAAAAANACNTGGGGGGAAANNAAAAANTTGGGCCTTAAANNN
CAANCNNANGNTTTNAANNNNNCCCCNGNTTTTNCNGNAAAAAAANTTTTNNTNNNTCNNNAAAN
AAAAAATTGNTCTNTNNGGGGGAAAAAAANGNCCCCNNNGGGGGGGNNNNNNCCNAATTNTTTN
NGGGGNNTTTTTAANGNGGGGGGGNNGAACCCAAANCCNNTTTNNAANGGGGGGGNTTTTTANN
NCCNNANNGGGGGNAAAAATTTTTNCCCNCNNNNNNNGGGTTTTTNCCAANGNNNAAAAAAAGNN
TNNCNTTTTNGNNNAANNCNTAAATTTCCNGGGGNTTTTANNGGGTTTNGGGGCCAANTNAAANG
GAAANNAAAAATTTTTTTTGGANNANNCNTTTTNCCCCCGGCNGGGNGGGTTTCCCCCCCCCCNAA
AAATTTCCCACATTTTTTNCNNAAAAAGGGGGGGCCTTTTAACCNTNCAAANNANCCCCCNTGGGT
TNNGGGGGTNAANANTNGGGCCCCCCNAAAAGTTNTTTNAANAAAANNNTTTTNNAAANGGGNN
GGGGGNCCCCCCCTGTTTATTAAATNGGGAAACCNNNAAAACNNGGNGGTTNAAAAAAAAGGGA
NCCCCCGGGNGGGAAATTNNTANNAANTTTTTNNANCCCCCCCC

Sequence 489 cMhvSC019c02
NNNGNGCNGGTANCTTGGNCGGTNTTNACGGGNTTCNTGNTCATGGNGNNNNGGATNACGTGATA
CTAGACAAAAANNCCATTCCNNCCNAGNATGTCTTGNGCNNGGCGGGCGATNNNCANGGCTTTNC
NACANGTATTNCTCTNCAGCAGANAAACCATNTTNGNGGCAGNCTTGNNCNGNNCCTTNAAGCAN
CCGCTNTAAAACTANNGGATNCNCNGGNCTGNANGAATA

Table 1

Sequence 490 cMhvSC019c03
AGGTACANNGNNACNTANTTCNTTNTTNCCNAACNNNAANNTNGCNGNTGNTGNTGGTGTNATAT
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GTCAGGACGCTTATCTATATANTTTAACCCCCTNCNNCCNAAACCATTGACGCCATGNATGGGTTA
TNCGCAGTGACCGACAACCGAATTCGCTCTAT
Sequence 491 cMhvSC019d01
ACNTACTNGGTNCNNCTNTNTTANGAGGGTGNNNATGGACACCACTCCAGGTCTTGATGCTCTAG
GTATCTCACCTTCCATCCACACATGTTCACGTGGGTCNCGACTANAATTCACTCTATAGAGACACA
CACAGATGTAGGCCTTGNTGNTCTTGAATGCTTCTCAATTACTGANTGGCGGGATAACATGAGCNT
ACTCCGAGGANGGGCNTGGCNTTNTGNGCTCNACCCTAGGTACTGACAAGATTGGATNNCCTCCN
CCNAACACCCAATTGGTTGTAAATGCGCTNTAGAACTAGTGGATCCCCTNGGGCTGCATTTAATTC
GATATCAAGCTTATCTATTACCAACTAACCTAT
Sequence 492 cMhvSC021a02
ACGCCCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTTTCCCTATCGATCTCTTTAAATTTTTAGGCC
AATTTTGAGTAGTCAAAGTCAGAGCAGTCAATCTGTGTTGTGAGCCGAGGCACANNTGCAAAAGC
GTGTNTGAGGTGTCCGGTGGAGGTGGCANCCNANCTNTGGGACTAATCACCGTGCTGGGGACGGC
ACCGTGTNAGGATGCANGCAGATCCCTGCAAAAGTGTNTAAAATTCACACTNCTNTTCTGGAGGG
ACGTCGATGGTATTAGGATAGAANCACCAGGGGACCCCACNAACGGGGTNGTNGAAACAGCACN
CCTTATTTTGCCCACTTGGGAGGGGCNNTGACACCAAGAAAACCANATTTTTTGTTTTTTCACGGG
GGGGCCANTNTACACGTTTNTGTNTTGGGCCTTGGGCCGCTNTANAACTAAGGGGATCCCCCGGGC
T
Sequence 493 cMhvSC029d07
GTTCTGAGCCTCAGCTGACCATANTGCTCATGCCAAGTCCTGAGCAGGGCATNTTGAATGGTGGTT
CCCTCATGACTACATACACCGTTAGGGAATGTTTCGTTAAGAGGAAATCAAGATGTTCTAACCTGT
GAAGGTAGAATAGATTCCAGGCTACACAAACACATGAAGTGTGCCTTATATTGATTACTAAAGAG
GTTGCTGCCAAGACTGCTTCCAAAGGGCAGAANATAGCCCTAAAAAATGTTTGCAGTGTGGAAAT
GCATTTTTAATAAGTCATATTCTAGTAACAAGTTGCATTTGGTAAGACACAAAGAAACAATGTTGG
TNTGCAGAGTAGAAATCTCTGGAAGATGATATTGTCATATCAGAGATATTGTCAGTATCAGGAGAT
ACCTTGAAATCTCTGGAAAGATGATTTTTTTGTCTCACATATGGCATTNCACAAANTAANAATGCC
CAAAAACTTGCAAAAATTCACCCCCGTACCTCCNGGCCCGCTTNTTAGAAACCTANTTNGGGATCC
CCCCGGGGCCTGCCAGGGAAATTTCNATTATTCAAAGNCTTTATNGGATACCCCGNTNCTACCCTT
CCNANGGGGGGGGGC
Sequence 494 cMhvSC031e09
CGCCCGGGCAGGTGCGAGAATGAAGACTATTCTCAGCAATCAGACTGTCGACATTCCAGAAAATG
TCGACATTACTCTGAAGGGACGCACAGTTATCGTGAAGGGCCCCAGAGGAACCCTGCGGAGGGAC
TTCAATCACATCAATGTAAGAACTCAGCCTTCTTGGAAAGAAAAAAAAAAGAGGCTCCGGGTTGA
CAAATGGTGGGGTAACAGAAAGGAACTGGCTACNNGTTCGGACTATTTGTAGTCATGTACCTCGG
CCCGAGGTNCTTTTGCTNTCTGCCTTTGCCAATATTTACTTTGGATCTTTTGTTTTTTGCCNTTTATT
TNGTTTTTTGCCTCTGNTTTAAAACANGCCTAATTTNNGAAAGGGCAATAAGNGAANGCTTGCNAG
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GGGACTTCCTGCCTTGGATGGACNTANATTCCAAACACCNNNTTTTGAAACACTNGGATTTTCAAN
ACCACNACCANATGGATGATAAAATGGANTNGNTTTACCACNCCTTANTANCACCACCAACAACC
TANATTGTGGGTTAGNCCAAATGGAAAAAGAGAAACNTGGTNANTACTTCCTTTGGGNTGCTAAA
TTGGGAAAANAAAA
Sequence 495 cMhvSC035b03
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GCCCTCAGCAACCCTTCTGGCGGCAGACACAGTTGTTAGTTTTCCAACATCCTGCTTTCATGAGAA
CAGTTTTCTGTTTGCTCATATAGCCTTCAGTGGTATACTGAGTTGGTCACGACCTTCATTCTTTCGG
CCTGTAACATCTCCCCATTTTTGTTTTTGCATTAATTGAATAAAGGTAATTGCAGGTTGTGCAGCTC
TCAATTGCCGTTTGGTGGTCCAGCTGATTTTGCAGACTTATATCAGCTGTCAGCAGACTCGTCGCA
GGGTTTCTCATTCTCGTTCTTCTTGTCAGTGTCAGTTTCTCTGCTCCAGCAGACCTTCACTCACGTCC
CTGTCCTAGGTGCCAGTTGTCGCTGTTGGTTGTTATGGGAGTGAACGAAGGGGGATGAATGCAGA
ACGAAGACAAAGACAAAAAGTATTTTTGGAAGAAAGGGGTCAGGGGGCTCCTTCTAGTGAACAAG
GGGCCCCCCGCGTACCCTTGNCCGGCGGGCCNTTCTAGAACTAGGGGGATCCCCCCNGGGCCTGG
CAGGGAATTTCNAATATTAAAAGCTTTATTGATACCCNNTCCGANCCNTTGAANGGGGGGGG

Table 1

Sequence 496 cMhvSC038a11
CCGCGGTGGCGGCCGCCCGGGCAGGTACGCGGGGAGGTGGTGGCGAANCGCTCCTNCGAAAGGTT
TCNGAAGCTGGTGGTAGCTAGNNAAGATAACGCTGCGTTAGGGNATANNGCTTTTTNATGATGGA
ACTCCGATTGAAAGCAAGTT
Sequence 497 cMhvSC038c06
GGGCGAATTGGAGCTCCCCGCGGTGGCGGTCGCAGAAGAGAATCCCGTTGGTCTTGCTGTGCTGG
ATGAAGAAAAGGAAGGGGTGGTCGGCGCAGAAGCGGGGGACGAANNANGGCACACCGCATCACC
ANAANANCAGTTTTTNNNNNTGCAGCCTCCGNGCCTTCCTCATTGACCTCCACAAAAGACTTGNGC
NANAAACCTTTGGAANANNAAANNAGNTCTTGCNTGGNACCANTTCCANTANAATTTCTTGCCCTT
TGCCCA
Sequence 498 cMhvSC004e10
NTTCCTCCCACCCTTAGGGGGAAAA
Sequence 499 cMhvSC004e11
ACCGCGGTGGCGGCCGAGGTACCTGTCTTGGCCTCCTACAGNCCTTTTTACTTATTTTGTTTTTTAN
AATAGAGACAGGGTCTTACTATGTTGCTCAGACNGGTTNCAAACTCCTAGGNTCAAGCANTCTTCC
AGCCTCAGCCTCTAAAGTGCTGGGATNACAGGCATGAGCCACCACACCCGGCCAAG
Sequence 500 cMhvSC004g06
ACCGCGGTGGCGGCCGAGGTNCTTTTTTTTTTTTT
Sequence 501 cMhvSC008b01
CCGGGCAGGTGTGCGTGTGTGGAGTAAAATGCATCGGACAGTGATTGACTCCACTTTTGANTGAG
ATGTGGAGGCGGTANTGG
Sequence 502 cMhvSC012d02
AGGTACACACAGTTNACCACAAAACAGGCCTNTNTGAAAAAGCCATTGCCATGGACTGCCATACA
GACAATGACAAGACACAAATA
Sequence 503 cMhvSC012d06
ACNNGCCAGGNNCNTNNNNGCCTATTACACCTACNTGNCTCTGGNCTTTTATTTGNACNNCGANG
ANGTGGATCTNGAAGGNGNGANCCANTNCTTGCGNNAANTGNCNCATGAGAATCTCGA
Sequence 504 cMhvSC037g12
CTCCCCGCGGTGGCGGCCCGCCCGGGCAGGTACCACCATGCCTGGCTAATTTTTATATTTTTAGTA
GAGACGGGGTTTGCCATGTTGGCCGACTGATATCGACCTCCTGACCTCAGGTGATCTGCCCGCCT
CGGCCTCCCAAAGTGCTGGGATTACAGGCGTGAGCCACTGCGCCTGGCCAAGATTAGAGGTTTTAT
ACTTTGTATCATCCAACTTTGAAATTCTTGCTTGCTGGCACCTTGGCAAACCTACTGCCTGACACAT
GTGAGTGGGTTTCTAAAAATTTTTGT
Sequence 505 cMhvSC038a01
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GAGGCAGGAGAATGGCGTGAACCCGGGAGGCAGAGGTTGCAGTGAGCTGAGATCACACCACTGC
ACTCCAGCCTGGGCGACAGAGAGAGGCTCCCTCTCAAAAAACGAAACAATGTTCTTGGCTGGGCG
CCAACACANNTTTANNACCTGTTAATTCCCAAGCNGGTACCCT
Sequence 506 cMhvSC040g02
CTCCCCGCGGTGGCGGCCGCCC
Sequence 507 cMhvSH037e08a1
AGGNACTNTNNTTTTTTTTTTTTTTTTTTTCCTGANATGCGNGTGNCCTATNAACTTTCGATGGTAGT
CTCCGTGCCTACCATGGTGACCACGGGTGACGGTGGAATCAGAGGTTNTANNNCNGAGAGGGAGC
CTGAGAAACGGCTACCACATNCAAGGAAGGCAGCAGGCGCGCAAATTACCCANTCCCGACCCGGG
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CCGGNTCGGACCCTTNNAGGGGGGGGGGGGGCCCCGGGNTNCCCCCNAGGCCTTTTTTTGGGNTTC
CCCTTTTTTAGNTTGGAGGGGGGGGNTT
Sequence 508 cMhvSH066a01a1
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CGAAGCGCTGCAAGAAGTCTTGAAGAAGCTCAAGAGTAAACGTGCTCCCATCTATGANAAGAAGT
ATGGCCAAGTCCCCATGTGTGACGCCGGTGAGCAGTGTGCAGTGAGGAAAGGGGCAAGGATCGGG
AAGCTGTGTGACTGTCCCCGAGGAACCTCCTGCAATTCCTTCCTCCTGAAGTGCTTATGAAGGGGC
GTCCATTCTCCTCCATACATCCCNATCCCTCTACTTTCCCCAGAGGACCACACCTTCCTTNCCTGG
AGTTTTGGGCTTAAGCCAANANATAAAAGTTTTTTATTTTTCCTCTTGAAGGGGAAAANGGGCTTC
TTTTTTCCTGGGTTGTTTTNCAAAAAANTTAAAAGNAANCCCCTTTTTNGGATTGTTTTNCTTGGGG

Table 1

GGAAAAAAAAAAAAAAAGCCCTTTTGNTANNGGGGGGNTNAAAAAACCNGTNNNTNGAAAAANG
TTTTTTTTTTTNTTTTTTTTTTTNGGNTTGGNNNAANANCNTTTTTNTTTNAANCTTTNCCGNGGGGG
GGGGNNNNTTTTTTTAAAAAAAANANGGGGCNCCCCCCNCCNGGGNNGNNGGGGANGAAAATNN
NTANTTNTNGNGTTTTTNTTCCCCCCCCCCCCCNCCCN
Sequence 509 cMhvSH026b01a1
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TCTTCATTTGTCTTGCTTGAAACCTATGGTTGCGCATCACCTGCTTCCAGCACTTTAGTGAGATCAA
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CCCCACTAGGGGCAATACCCGGATTNTNAGTGGGGGGTNCCTTTTTTNGNCGTTTTTNNCTNAGGG
GGGCNCGGGGCANTTCCNNATCCCCCCCGGGGGNGGGNAAAAACNTTNGGGGAANTTTNNNTNTT
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GGGNTTTTTTTTTTTNGGGGNNGGGGGAAAAAAANAAAAAAAAAGGNNNGGGGGGGNAAAAAAA
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TNGGNNGGGGGGGGGGNTTTTAAAAAAANAAANNAANCCCCCCCC
Sequence 510 cMhvSH109g02a1
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AGATTTCTTTGGAGGATGCTCTTTCCAGCCAAGAGGTGGGAGGTTCGCCTATATCTGCAGTGGAAG
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TTGGGAATACCCCATGACACTTGTCATTTGGGCCGGCCCGCTTCTAGNAACTAGTTGGGATCCCCC
CGGGGCTTGCAGGGAATTTCGAATNTCAAANCTTTATCNGAATTACCCCGNTCTGAACCTTCGAAG
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Sequence 511 cMhvSH124f02a1
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AAAGTCAAGTCATTAAAAATAGCCCCCTCATTGAAGAGTGGGAACGTAGGTGTGATGTTCTGGCA
TAAGGAGTGAAAAAAGAAAAAGCTCTATTACTTGAAGCTTTTCACCAGGGGCAGAGAGAATGGCC
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CAGAAAGGAGAACCAATTATTCCTAATTCCACGGGCGGCATCCTCTGACTCCCAAACTCCCAAAGT
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NTTCTAAGAAACTAGTGGGATTCCCCCCNGGCTTGGANGGAATTTCCATNTTCCAAGCTTTTTTC
GAATACCCGTCCCNAANCCTCNGAAGGGGGGGGGGC
Sequence 512 cMhvSH110a07a1
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NTCNTAGGCCAAGCGATNAAAANAGGGCCCCAGGAGCCCTGGGGTCCCNAGGNGGCTCAAATGG
AANCCATGGGACGGCCNNTNTAAAACTAGNGGATCCC
Sequence 513 cMhvSH038g10a1
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AGCGCTTCAGTTCAGCTTTAAAGGCCAGGNACGGGCCACACGTGGCTTGGCGGCCTCGTTCCAAGT
GGCGGCACGTCCTTGGGCCGTCTCTAAATGTCTGCAGCTNAAGGGCTTGGCACTTTTTTTAAATAT
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CAATTCGGGGGGTGGATCCTGTTCTGCGCTGTGTACCTGCCCGGGGGCGGGCCCGCCTTNTAGGAA
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AATACCCGTTCCGAACCCTTCNGAANGGGGGGGGGGGCCCCGGGGTACCCCCAANCTTTTTTGGTT
TCCCCCTTTTAAAGTGGAGGGG
Sequence 514 cMhvSH109f02a1
CCGGGCAGGTACTTGGAAAACTTGTTGAAGATGATGGGGNNGGGAAGGGCCACCANAAAAANAA
NANNTTNTTNTTCTTNTGCTGGCGATGAGCTTTCCCGCCAAGGTGACCGGGTGGGTGTCTCCATAG
CCCACAGTTGTCATGCTGATGGTGGCCCACCACCAGCAGATGGGGATGCTGGTGAGGCTGGATGT

Table 1

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GTTAGGGATCTGNGACCCACCCTTGCCCCATGTTCTCNAATATCCCTCACTCTCTTTNCTCCTTGGG
TGGTCTTACAGCCCCAACNGTTGGCATAGGAAAGGGGAAATAATTAGAAGACAAAAGTTCAAATG
GATGGTTCNAACAGGGTTTTTTTCCCANGAAATTTTCTTTTTGGACAAAGGGAAGCCGGGCCAAG
CCCAAGGCCCCGGGACCGGGCAAAGCCTCCC
Sequence 515 cMhvSH110d10a1
ACGCGGGGATACAAGAAAGAGGAAGAGAAGCAGGAAGATTCTACATACAGGCTGGCTGTGTTTCC
CCTGGGGCATGCTCCTGTTTACTGGTCCCATGCCAGGTTGACTCATTGCCTCGTTCATGGGTGGAAT
TAAAATGCCTACCTGGGGAATAAATAGAGCAAGGCTGGGTGCTCACCTCCACAGCGGCTTCCTTG
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TTACAANGAANAAANTTGNTGGAAAACCTNGCTTTNCATGGTTTTATTTTAAATTAAAATTGGANG
GGCAAAAAAAAAAAAAAAAAAAAAAA
Sequence 516 cMhvSH046b03a1
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GCCACCCACAGAAATGAAGCAGAGTGGCCTAGGCTCACAGTGCACAGGGCTGTTCAGCACCACAG
TGCTGGGTGGCTCCTCCAGTGCCCCGAATCTTCAGGACTACGCCCGCAGCCATGGCAAAAAGCTAC
CACCTGCCAGTCTGAAGCACCGAGATGGGTTTGAAGGGTGTTCCATGGTGCCTACCATCTACCCTC
TGGAAACACTGCATAATGCCCTTTCCCTACGTCAAGTGAGTGAATTCTTGAGTAGAGTCTGCCAGC
GCCACACTGATGCCCAGGCACAGGCATCTGCAGCCCTCTTTGATTCCATGCACAGCAGCCAGGCCT
CAGATAACCCATTTTCTCCACCACGT
Sequence 517 cMhvSH108g03a1
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AGTATGACCAGCAAATGATAACTGATTCCCTNAGGGGANAANAAACTGGGTGGCTGAAGGACAG
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TTTCAAATGTTTGAAGAACCATTGGCTCCCTTATCAAAATGTAAATACCAAGGAAAATN
Sequence 518 cMhvSH075f10a1
GNGGNGGCGGCCGCCCGGGCAGGTACGCGGGGGGCGGCGGCGGAGAGAGCTGGCTCAGGGCGTC
CGCTAGGCTCGGACGACCTGCTGAGCCTCCCAAACCGCTTCCATAAGGCTTTGCCTTTCCAACTTC
AGCTACAGTGTTAGCTAAGTTTGGAAAGAAGGAAAAAAGAAAATCCCTGGGCCCCTTTTCTTTTGT
TCTTTGCCAAAGTCGTCGTTGTAGTCTTTTTGCCCAAGGCTGTTGTGTTTTTAGAGGTCCTATCTCC
AGTTCCTTGCACTCCTGTTAACAAGCACCTCAGCGAGAGCAGCAGCAGCGATAGCAGCCCGCANA
AGAGCCAGCGGGGTCGCGTAGTGTCATGACCAGGGCGGGAGATCACAACCGCCAGAGAGGATGC
TGTGGATCCTTGGCCGACTACCTGACCTCTGCAAAATTCCTTCTCTACCTTGGTCATTCTCTCTCTA
CTTGGGGAGATCGGATGTGGCACTTTGCGGTGTCTGTGTTTCTGGTAGAGCTTCTATGGAAACAGC
CTTCTTTTGACAGCANTCTACCGGGCTGGTGGTGGCANGGGTNTGTTTTGGTCCTGGGAGCCATNA
TCGGGNGACTGGGNGGGACAAGAATGNTNTAATTNAGGGNGGCCCCACCCTNGGGTGGNGGGTA
CCNCGGGCCCCATATAAAAANAAANGGNNANCCCCCCGNGGGGGGGGGAAANTTTAAATCNANG
NCTTTCCCNCCCCCCCCCCCCNGGGGG
Sequence 519 cMhvSH128d09a1
CCGGGCAGGTACGCGGGAGGCATGCACCACCACGCTCGACTAATTTTTGTATTTTTAGTAGAGACG
GGGTATCACTATATTGGTCAGGCTGGTCTTGAACTCCTGACCTCAGGCGATCTACCCGCCTNGACC
TCCCAAAGTGCTGGGACTACAGGTGCCCACCACCACGCTTGGCTTATTTTTTTTGTATTTTTAGGAG
AGACGGGGTTTNACCGCATTAGCGAAGATGGTCTCGATCTCCTGACCTCGTGATCCACCCGCCTCG
GCCTCCCAAAGTTCTGGGATTACAGGCTTGAGCCACTGCGCCNGGCCTAGAACCCTGCTTCTCATA
TAAGATGGGCCTGCACCTACCTCTGGCATGTTTTCTTTGTGTATTTCCCGTTTTTNATCCTGTAACT
AAATGCTCATTATTTAANAACACTCCAGTTACTTTTCCCTTTAGGCCTGGCAAAACTTTNCTNTTTC
TTTTTTTTTTTTTTTATAAACTGNAACCTTTGGGGCGGGTTTAGAAAACTAANTGGGATCCCCCC

Table 1

NGGGNCTNGAAGGGGAAATTTGGNNTTTTCAAANCTTTAATTNNANTACCCGNCCCANCCCCCAA
GGGGGGGGG
Sequence 520 cMhvSH075h11a1
TGNACCTCCACCGCGGTGGCGGCCGTTTGAGAAGCCANCGCTCACCCACCCGGGGTCTCTGTGCAT
TGACCTTTGGGTGCTGACTTGGAGAAAAGCACAAACACGACCAGTCCCATCCTGGCTCCCGTGGG
GCTTCTTCTATCTACGCATTGTATCGACTGCATTAGTTGGACTAAGATGATGACTCAGTTAAAGGA
GGAGACAAATGCTGACTGTCTAAGCAAGAATGGCCCAAGCTGGCAAGAAAAAGCACACTGNGAT
ACATAGGGATACAGGAAGGGCAGGAGCCTTTTTGCCTGCCGGGATCTAACAANCATTTACATTTTG
TTTTGCCTGCCAAACCTATCAAGAAGGGATTTCTTGTTTGGGCCCAGGGGGAGTCTCCACTTGGAA
ACAAAACAAAAAATGGCANGTCAAAAAAGTTCTTTGAGGTGTCCCTATTCCAAGCCAGCCCAAGA
AGTCCTCAATCCCGTCATCCCACGGGGAAGAAGTTCCTTTTGAAGGGGAAAGCATGAAAAGTTCC
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Sequence 521 cMhvSH105f02a1
TGTACTAANCCATTGTGACAGAAACTTNCTTTACCATTGATGAGCTGGAAGAACTTTATGCTCTTTT
NNAAGGCANTAACATCTCACCAGCTGNTACTGGGGCGGGAGCAGCNACNCGCTGGACCGGCATGA
CCCCAGCCTGCCCTACCTGGAACAGTATCGCATTGACTTCGAGCAGTTCAAGGGAATGTTTGCTCT
TCNTCTTTCCTTGGCGCATGTAGGAACTCACTCNTGACCGTTTCANGGCCTTCCGCTTTGTTCCAGT
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Sequence 522 cMhvSH007h11
AGGTACCCGGGATTTNACCANTGTNACTGTGCTAAATGGTTCTGTCTTCCTCAGTGTGATGGAGAA
AGCCCAGAAAATGAATGATACTATATTTGGNTTCNCANTGGAGGANCGCTCATGGGGGCCCTATA
TCANCNGTATTCAGGNNNTATNNGCNAACANTNATNACCNANCCTACTGGNAACTTANGAGTGGA
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CTTGAGCCCAGGAGGCNATAAAGTCCCAANACTTNCCTNATCTGCCNANTTATACCTTNATGCCTG
GGGCAACACAACNAGACNTGCCNNCTNAAAAAAA
Sequence 523 cMhvSH016e11
CCGGGCAGGTACAACACTCTGTCCCTACAAGGGCACAGGTGCCACCTTGAGCAGCTGTGACTATGT
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ACAGTGATGACACCTGTTCCAGGGACAGTTATTGCTAAGGGGTAGAACCACTAGGGGCTCAATGC
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Sequence 524 cMhvSH025e11
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GCAAGCCATCCACAGCTGCTGCTGGAAGGGTGGTGCAGATCTAACAGTTGGAGACATTGGCCACC
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Sequence 525 cMhvSH027a12
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Sequence 526 cMhvSH029e11
AGCTCCACCGCGGTGGCGGCCGAGCTGACGCAAACATGCAGATCTTTGTGAAGACCCTNGNNGGN
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Table 1

GCAAAGTTGTTGGTTCACACCCAAACAAACCCTTGCGGTCCCAAGGNAAGTAAANGNTCANAATT
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CNGAAATATTTNAAAAGCCNTTAANTNNGANTTCCCNGGTCCGAACCCNTCCCGAGGGGGNGGGG
Sequence 527 cMhvSH035c08
AGATACGCGGGGGAGGAGTGAGCTCTTGGGGTGTCCAGTTGGTTGCCGCGGCAAGTCTCTCCGAG
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NANCNNACNAAAANNNANTNANTTTAANTANTTTTTTTTTTTTTTTCCCC
Sequence 528 cMhvSH041f10
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CAAAAACAACCCGGTTTTATACTATTGGAAATCCTAAAGGTAGGAATAATGGGAAGCCCTGTCTTG
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AAAATAAAACCTTTCTTTAACCATGGCTTTCTTCCAAAAANNAAAAATTGTAATNNTANATAAAAA
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Sequence 529 cMhvSH044f03
AGGTACGTCCAAATGACGAAGTCACTGCAGTGCTTGCAGTTCAAACAGAATTGAAAGAATGCATG
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Sequence 530 cMhvSH053f04
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GCTGGTCACGCTGGCCCTCTGCTGCTACCAGGCCAATGCCGAGTTCTGTCCAGCTCTTGTTTCTGAG
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CCCTTCCCGGGAAGCTGTTGCCNGCCAAGTTTAGGGAGTTGGAAAGAAGATTGCACGGGATCAAG
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GANTCCCCCCCCCNGGGGCNTTGGNNAAGGGNAAATTTNTNGAATATTNCAAAGGCTTTTATTCCG
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Sequence 531 cMhvSH054g02
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Table 1

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Sequence 532 cMhvSH054h05
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Sequence 533 cMhvSH055b06
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GGGAAAGAGGCGAGCCTATGAAGTCCCAGGATCAAGGTTAGAGACCCTTTTTTTACTGTCTTCTTG
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TCCTGNTCTAAAGCCTTTTAACTAAAC
Sequence 534 cMhvSH055b06
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TCCATTCCAAACGGTATGGCGAGCACTGCGCATGCGGGAAACCCACCCTGTAAGGGAAGAATCCT
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TCCTGNTCTAAAGCCTTTTAACTAAAC
Sequence 535 cMhvSH058f12
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Sequence 536 cMhvSH058g12
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AAAAAGGGGGGGGGG

Table 1

Sequence 537 cMhvSH060g10
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GANAAAAAAAAAANGAAAACCCTTACCAATTTTAATTTTTNG
Sequence 538 cMhvSH062c09
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CGGTTCNGAACCCCNTCNTAANGGGGGGG
Sequence 539 cMhvSH063c04
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AAAACCTTTTCTNCAAAAAAAAAAAAAGGGGGTTAAGGGGCCAATTGNANCGNAANAATAAACA
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Sequence 540 cMhvSH071c06
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ACACTTTTCGGCCCGCTCTTAGAAACTAGTGGGATCCCCCGGGCTGCANGGAATTCNGATATCAAA
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CCCCTTTTTAGTNGAAGGGGT
Sequence 541 cMhvSH073b05
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GAGGATNGGGGCACTTCCCAAGATGAAATGCTTGTCCCTCTGCCGCACCGAAGAGGCCAGCCAGT
GCGGAAAGCAGCAGCAGCAGCATCACCATCTTGGGGCTGGGTGGCTGGAGAAGGAACCTGGAGCT
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GAATCCCCCCGGGGCCTGCAAGGGAAATTTCGGAATATACANAGGCCTTTATCNGATACCCGTTCG
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AGCCC
Sequence 542 cMhvSH073f04

Table 1

CCGGGCAGGTACACAAGAGTTTGTCAGACAAATAAAATAAGAATACTTCACACACGTATCAACAC
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Sequence 543 cMhvSH074c08
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Sequence 544 cMhvSH090b03
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CAG
Sequence 545 cMhvSH090b03
CTCCCACACTTTTGTATCCCTTTAACATAGGGACTAAATGCTCCCNTTGGTCGTAAANCATGGGGT
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TTGTAGTCCAATGCTGATCTCTGTTATGGGGCGTT
Sequence 546 cMhvSH101a06
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GTTTTTGGTTCCTTTAAAATTTNGGGAAAA
Sequence 547 cMhvSH110a11
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Table 1

Sequence 548 cMhvSH110a11
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Sequence 549 cMhvSH119h04
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Sequence 550 cMhvSH001c09
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Sequence 551 cMhvSH001g03
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Sequence 552 cMhvSH002e04
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Table 1

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Sequence 555 cMhvSH016d01
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Sequence 556 cMhvSH021c01
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Sequence 557 cMhvSH027e11
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Sequence 558 cMhvSH038a05
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AAAAA
Sequence 559 cMhvSH039f09

Table 1

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Sequence 560 cMhvSH043g09
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Table 1

Sequence 565 cMhvSH057d12
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Sequence 568 cMhvSH062a08
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Sequence 572 cMhvSH064b08
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Table 1

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Sequence 573 cMhvSH070a02
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Table 1

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CCTTTCC

Sequence 579 cMhvSH093c11

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Sequence 580 cMhvSH094f06

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Sequence 581 cMhvSH095d01

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Sequence 582 cMhvSH095d07

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Sequence 583 cMhvSH099d01

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Table 1

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TAAGGCCTATCTCCTNTTTAACCCTGAACGTACCTCGGCCCGTCTAGAACTAAGNGGGATCCC
Sequence 584 cMhvSH099e09
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Sequence 585 cMhvSH102g10
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GCCGCTCTANAACTA
Sequence 586 cMhvSH103c09
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Sequence 587 cMhvSH106c06
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Table 1

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Sequence 589 cMhvSH110d05
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Table 1

Sequence 594 cMhvSH122e04
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Sequence 599 cMhvSH130h08
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Table 1

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Sequence 601 cMhvSH014d04
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Sequence 609 cMhvSH041a04
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Table 1

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Sequence 614 cMhvSG025b07a1
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GCATCAGGAACGGC
Sequence 615 cMhvSG025b07a1
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Sequence 616 cMhvSG048d02a1
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Sequence 617 cMhvSG048d02a1
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Table 1

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Sequence 622 cMhvSG078d09a1
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Table 1

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Table 1

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Sequence 637 cMhvSG011e09a1
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Table 1

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Table 1

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Sequence 654 cMhvSG050g10a1
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CCGCCCGTCANGACCGCCGGCCCGCTTCTTAGAAACTAAGTTGGGATCCCCCGGGCCTGGCAGGG
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TACCGAAGCCCGGGGAAGCCATTAAAANGTGTTAAAAAGCCCCTG
Sequence 655 cMhvSG052h11a1
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Sequence 656 cMhvSG052h11a1
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Sequence 657 cMhvSG045d12a1
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Table 1

GGAGGCAAACGTGTTACCGATGATNGGGGAAAGACCATTACCACGTANGAAGAACAGTTGGCAG
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GGGGGGGCCCCCGGGNTNNCCCCCAACTTTTTTTTGG
Sequence 658 cMhvSG040a08a1
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Sequence 660 cMhvSG004f06
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Sequence 661 cMhvSG008d05
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Sequence 662 cMhvSG009c03

Table 1

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GGGGGGCCCCCGGGTACCCCCAACTTTTTTT
Sequence 663 cMhvSG009c03
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Sequence 664 cMhvSG015c09
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GGGGCC
Sequence 665 cMhvSG016d10
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ACATCAGGTTATCCACGTAGCTCTGCCAACCGGCCATCTTCGAGCCCCCCCGCGTACCTCGGC
Sequence 666 cMhvSG017e10
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GAGCATGCCAACCTGTGGCTG
Sequence 667 cMhvSG017f04
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GGTGTAGTCATCAGGATGAGCTGTACCT
Sequence 668 cMhvSG025a06
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Table 1

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Sequence 670 cMhvSG025f03
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Sequence 671 cMhvSG025f04
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Sequence 672 cMhvSG025g02
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Sequence 673 cMhvSG025g03
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Sequence 674 cMhvSG032e06
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Sequence 675 cMhvSG038d07
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Table 1

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Sequence 676 cMhvSG038g04
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Sequence 679 cMhvSG038g06
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Sequence 683 cMhvSG048a02
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Table 1

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Sequence 684 cMhvSG048g01
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CACC

Sequence 685 cMhvSG050a07
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Sequence 686 cMhvSG050a09
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Sequence 687 cMhvSG050a09
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Sequence 688 cMhvSG052a02
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Sequence 689 cMhvSG053a09
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Sequence 690 cMhvSG053a09
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Table 1

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Sequence 692 cMhvSG053h06
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Table 1

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Table 1

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Table 1

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Table 1

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CAGGTGCACGCAGTGAGCGGAGGCCGGAGAAACCCTCAAGCCTGAGCGGGTCAGAATTATAGGG
GAAAAAAAGCCACAAAATTGTTCACCCCCAAGCAACCACCGAAATAATGAGATCGGATGCAGTGG
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Table 1

NGCTTGCAGCCCNAGAGGGTGGGAGAAAATGTTGAAATTCAAGAATTTNAAAAACNAAAAACCA
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Sequence 721 cMhvSG010f10
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CTGAGAAGGCAGAATGGAAACGCAGGGCTGGAGGGGCCATGGGCACAGGTTTGGGGGCTCCTTCC
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TGAGTGGAAGATGGGTTGGGGGGGCCAACGGGCTTATCTTGGGCTTCTTAGCACACTTCNATGN
GGGAANAACCCAAGCCTCTTTGGGGAAACAAACAAGGGATTGGGGGGGTGCCTTGGGGGAATNG
GGGGGTT
Sequence 722 cMhvSG012b06
GGAATTCAAAATTAACATNCTTGTCCGNGNGCTTNTTNTANACNCCAAAAAAAGTTTCAACCTTGN
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ANTTGGATNCCCGTCGAACCTTTNGGGGGGGG
Sequence 723 cMhvSG012d06
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Sequence 724 cMhvSG012f07
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Table 1

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GCCCCGAGGGAGGGGTTAAAAAAAAA
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TCCCCCGGGCTGCAANGAATTCCATATCAA
Sequence 728 cMhvSG014g05
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CCGGGGAAGCCATAAAAAANNTNGTTAAAAAANCCC
Sequence 729 cMhvSG015b06
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TGATTCTAGTATGAAGTTACCTCGGCCGCTTCTA
Sequence 730 cMhvSG015b06
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Sequence 732 cMhvSG015b12
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Sequence 734 cMhvSG015h02
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Sequence 735 cMhvSG027b09
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GACACTGCTGGCAAACGGAGACCTATTTTTGTACCT
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CNAGCCCGGGG
Sequence 737 cMhvSG027g03
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Table 1

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Sequence 738 cMhvSG027g12
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Sequence 742 cMhvSG038b09
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NAGCGNNTCCTGAANATGCAAAACCAGC
Sequence 743 cMhvSG038b09
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Sequence 744 cMhvSG038f03
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Sequence 745 cMhvSG039d11

Table 1

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Sequence 746 cMhvSG040c02
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Table 1

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Sequence 752 cMhvSG052a08
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Sequence 758 cMhvSG070g11
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Table 1

Sequence 759 cMhvSG072g01
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Sequence 760 cMhvSG072g01
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Sequence 761 cMhvSG073g03
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Sequence 762 cMhvSG078h09
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Sequence 763 cMhvSG078h09
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Sequence 765 cMhvSG040e03
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Sequence 767 cMhvSG064e10
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Sequence 768 cMhvSB024h11a2
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Table 1

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Sequence 770 cMhvSB026e03a2
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Sequence 771 cMhvSB026f01a2
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Sequence 772 cMhvSB027g06a2
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Sequence 776 cMhvSB029c11a2
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Table 1

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Table 1

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Sequence 785 cMhvSB049c11a2
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Table 1

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Sequence 800 cMhvSB075f02a2

Table 1

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CGGCCGCTCG
Sequence 806 cMhvSB090b03a2
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Sequence 807 cMhvSB090c01a2
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Sequence 808 cMhvSB091b10a2

Table 1

NATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACCTTATTTACACCCATGTGCAGGGCAAGGCAAG
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Sequence 809 cMhvSB091c11a2
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Sequence 810 cMhvSB092a12a2
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Sequence 811 cMhvSB092h02a2
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Sequence 813 cMhvSB093b08a2
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Sequence 816 cMhvSB094a08a2
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Table 1

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Sequence 817 cMhvSB094g05a2
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TTGGGCGACAAGGCATTTACCGTCACGCAACTTGATCCCAGTGAGCCGGACCGGGGCCGCCTCGTT
CCTGAACTTCCCCC
Sequence 818 cMhvSB095b10a2
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Sequence 821 cMhvSB097h05a2
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Sequence 822 cMhvSB101b10a2
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Table 1

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Sequence 825 cMhvSB105h07a2
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Sequence 826 cMhvSB027b01a2
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Sequence 827 cMhvSB027g10a2
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Sequence 828 cMhvSB031h02a2
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Sequence 829 cMhvSB038f11a2
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Sequence 830 cMhvSB065c08a2
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Sequence 831 cMhvSB071c02a2
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Table 1

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Sequence 833 cMhvSB082e04a2
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Sequence 836 cMhvSB092d06a2
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Sequence 837 cMhvSB093f05a2
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Table 1

Sequence 838 cMhvSB093f12a2
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Sequence 839 cMhvSB026g10a2
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Sequence 841 cMhvSB028a04a2
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Sequence 845 cMhvSB044f11a2
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GCATTTCATGGTCTTAAGTTCACTTCTCATCAAAGGATCCCTGTGGTGTTGTGTTTGATCTTGAACT
TGCTTTGCTGTTTTAGTCTTTTCCATCAAGTGAAAAAACTACTTTGATGACATCCTTTCATCCTTTTC
ATTCTTCCAGCAGTATTTGGTATCTTTTTACACTAGGCTTGCAGGCCAGGGAATCTGCATGCCAGTC
TCCACTTGCTGAACAGCAGTTTTCTTTTGATCATATTCGGTTTTAGGACACTTGAGGC
Sequence 846 cMhvSB049c12a2
AGGTACTGTGGGTTCTGAGTCAAGGATCCCAGTGCTGCCAGGAACCAGCAGTCAGCTGCGCCTCCT
TGTTGGATGTCAAATCTGCTTATATCATCCAGGATGAAGTGAGGAGGACCCCCTGGTAGATCCTGT
GGCCGCTTCCATATCACATTGGAGAGGCGTTTTTCCTGGAGCAGCTTCTGGCCTATGGAAGAATCT
GCTGCAGGGAATGTCTCATCCTTAAACGTCCGGCCCATGCTCAGGCAGTGATCCCGCAAGGTGGTA

Table 1

AAGTCCTGGTCTTTGAACTTGATGATGGAGGTCTCCACTGAAGGCTCCTGGTAATACGCCATGACT
CTCCTTAGAAGACTTC
Sequence 847 cMhvSB049e07a2
CCGGGCAGGTACGCGGGGAAAGTGTGTAGCACCTCCACCTTCTCTCTCTCTCTCCCTCTCCCTCTCC
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CTGCCTCTGTCCCTCCTCTCACATGCCATTGGTTAACCAGCAGACAGTGTGCTCGGGGGCGTTGCC
AGCTCATTGCTCTTATA
Sequence 848 cMhvSB049h11a2
AGGTACTGTGGGTTCTGAGTCAAGGATCCCAGTGCTGCCAGGAACCAGCAGTCAGCTGCGCCTCCT
TGTTGGATGTCAAATCTGCTTATATCATCCAGGATGAAGTGAGGAGGACCCCCTGGTAGATCCTGT
GGCCGCTTCCATATCACATTGGAGAGGCGTTTTTCCTGGAGCAGCTTCTGGCCTATGGAAGAATCT
GCTGCAGGGAATGTCTCATCCTTAAACGTCCGGCCCATGCTCAGGCAGTGATCCCGCAAGGTGGTA
AAGTCCTGGTCTTTGAACTTGATGATGGAGGTCTCCACTGAAGGCTCCTGGTAATACGCCATGACT
CTCCTTAGAAGACTTCCGAGGT
Sequence 849 cMhvSB063a08a2
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GAAGGCTCCTGGTAATACCCCATGACTCTCCTTAGAAGACTTCCGAGGTCCTTTCCTGTTTCCTANG
CAGGTGTGTCTGATGGAGGAGGGGAGACCGGCAGGT
Sequence 850 cMhvSB063f02a2
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Sequence 851 cMhvSB071c10a2
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Sequence 852 cMhvSB071g06a2
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Sequence 853 cMhvSB073b07a2
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Sequence 854 cMhvSB073b11a2
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AGTCAGCAAAG

Table 1

Sequence 855 cMhvSB075c01a2
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GGAGGAAGGCAGACTGCAGGGGACCTACTTCTCTCGGGAATCTCAATACTTGGAACAAGAACCTC
CTAGACGGACCCTTTGGCATAATGAATTGGACCAACTGTAGGTTCCAGGACTAGAGAGCCAGCAA
TGCCTCCATGAACAATCTCACCCAATTACTCTGCTCAGGAAACGAGGTAACTGATGGACAGCCGA
GGCAGCCCCTT
Sequence 856 cMhvSB075e02a2
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TGTGGCCGCTTCCATATCACATTGGAGAGGCGTTTTTCCTGGAGCAGCTTCTGGCCTATGGAAGAA
TCTGCTGCAGGGAATGTCTCATCCTTAAACGTCCGGCCCATGCTCAGGCAGTGATCCCGCAAGGTG
GTAAAGTCCTGGTCTTTGAACTTGATGATGGAGGTCTCCACTGAAGGCTCCTGGTAATACGCCATG
ACTCTCCTTAAAAGACTTCCGAGGTCCT
Sequence 857 cMhvSB079a10a2
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TTCCTAGTTGAGGATCTGCCTTTACAAAAACCACTGAATAGTCTTTTATCACTAAAGCAAATGAAT
TCATCTTTTCTTTTAGATAGAATGATAAACA
Sequence 858 cMhvSB079c06a2
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CNCATTNAGTGAGGNNCAATCNGGAGGCTTGGCCGTANNTNTGGACCATATCTGGTTCTCNTGCTC
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TTCTGCTCATCTAACCTTAATGAAGAGGCCAGAGTTGGGTGTCACGCTGACAAAGCTCCACTGCTG
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Sequence 859 cMhvSB080a05a2
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ACGAATCTTCCCTGAAGGAGTGACAGTCTAGGGAGGAAGGCAGACTGCAGGGGACCTACTTCTCT
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ACTGTAGGTTCCAGGACTAGAGAGCCAGCAATGCCTCCATGAACAATCTCACCCAATTACTCTGCT
CAGGAAACGA
Sequence 860 cMhvSB080g07a2
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ATGCTCAGGCAGTGATCCCGCAAGGTGGTAAAGTCCTGGTCTTTGAACTTGATGATGGAGGTCTCC
ACTGAAGGCTCCTGGTAATACGCCATGACTCTCCTTAGAAGACTTCCGAGGTCCT
Sequence 861 cMhvSB082a03a2
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TATAAACCAGTGACTAACCAGGTTTGAGTGTCACCCATACCTCACGCCAGGANAAACTGATCCAGT
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Sequence 862 cMhvSB082e03a2

Table 1

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CTTTACCACCTTGCGGGATCACTGCCTGAGCATGGGCCGGACGTTTAAGGATGAGACATTCCCTGC
AGCAGATTCTTCCATAGGCCAGAAGCTGCTCCAGGAAAAACGCCTCTCCAATGTGATATGGAAGC
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AACAAGGAGGCGCAGCTGACTGCTGGTTCCTGGCAGCACTGGGATCCTTGACTCANAACCCACAG
TACCT
Sequence 863 cMhvSB083d09a2
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Sequence 864 cMhvSB090g05a2
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Sequence 865 cMhvSB090h07a2
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Sequence 866 cMhvSB091d11a2
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Sequence 867 cMhvSB091f05a2
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Sequence 868 cMhvSB092b02a2
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Table 1

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Sequence 869 cMhvSB092f01a2
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Sequence 870 cMhvSB093f02a2
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Sequence 871 cMhvSB095b05a2
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Sequence 872 cMhvSB095b08a2
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Sequence 873 cMhvSB095d09a2
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AACGCCTCTCCAATGTGATATGGAAGCGGCCACAGGATCTACCAGGGGGTCCTCCTCACTTCATCC
TGGATGATATAAGCAGATTTGACATCCAACAAGGAGGCGCAGCTGACTGCTGGTTCCTGGCAG
Sequence 875 cMhvSB095h12a2
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Table 1

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Sequence 876 cMhvSB096d04a2
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Sequence 877 cMhvSB096e07a2
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Sequence 879 cMhvSB097a09a2
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ACGGGCAGGTTC
Sequence 880 cMhvSB097b12a2
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TCCTTAGAAGACTTCCGAGGTCCTTTCCTGTTTCCTAGGCAGGTGTGTCTGATGGAGGAGGGGAGA
CGGGCAGGTTCCA
Sequence 881 cMhvSB097c01a2
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TGCTTCCTGGAAAC
Sequence 882 cMhvSB097c02a2
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CCTGGAGCAGCTTCTGGCCTATGGAANAATCTGCTGCAGGGAATGTCTCATCCTTAAACGTCCGGC
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Table 1

CCACTGAAGGCTCCTGGTAATACGCCATGACTCTCCTTAGAAGACTTCCGAGGTCCTTTCCTGTTTC
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Sequence 883 cMhvSB097g01a2
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Sequence 884 cMhvSB101h01a2
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Sequence 885 cMhvSB105g08a2
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Table 1

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Sequence 891 cMhvSB030a07a2
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Sequence 893 cMhvSB031h07a2
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Sequence 894 cMhvSB013d11a1
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Table 1

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Sequence 897 cMhvSB083h11a2
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Sequence 903 cMhvSB092a05a2

Table 1

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Table 1

Sequence 911 cMhvSB079b08a2
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Sequence 912 cMhvSB068b04a1
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Sequence 915 cMhvSB026c05a2
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Sequence 916 cMhvSB096f10a2
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Table 1

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Sequence 920 cMhvSB049g09a2
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Table 1

Sequence 925 cMhvSB091g07a2
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Table 1

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Sequence 939 cMhvSB023a03

Table 1

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Table 1

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Table 1

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Sequence 957 cMhvSB046c07
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Sequence 958 cMhvSB047f10
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Table 1

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Sequence 961 cMhvSB054d05
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Sequence 966 cMhvSB075a10

Table 1

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Sequence 967 cMhvSB082f05
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CNANAANAGACCTTNAANTGCCCATGCCCACAATGGGCATCTTGGCTTTTGTACCT
Sequence 968 cMhvSB083a12
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Sequence 969 cMhvSB083a12
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Sequence 970 cMhvSB086c06
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Sequence 974 cMhvSB095h05
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Sequence 975 cMhvSB096b06
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Sequence 976 cMhvSB096d07

Table 1

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Sequence 977 cMhvSB098f05
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Sequence 978 cMhvSB098f05
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Sequence 979 cMhvSB099b12
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Sequence 983 cMhvSB005a07
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Sequence 984 cMhvSB006h07

Table 1

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Sequence 985 cMhvSB007b05
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Sequence 991 cMhvSB015d09
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Table 1

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Sequence 999 cMhvSB032c07
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Sequence 1000 cMhvSB033a04
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Table 1

CGGAANTTTTAAAAGGNNAAAANNCCNNGGGGNCCCCTNAANGGNGNGNCNCTAACCNCCAAA
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Sequence 1001 cMhvSB045c01
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GTTCCCCTTTTAAGGT

Sequence 1002 cMhvSB046f03
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NGNGGGGGGC

Sequence 1003 cMhvSB048g08
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Sequence 1004 cMhvSB049c01
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Sequence 1005 cMhvSB051g12
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Sequence 1006 cMhvSB052e12
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Sequence 1007 cMhvSB055e01
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Table 1

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Sequence 1008 cMhvSB055e12
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Sequence 1011 cMhvSB059a06
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Sequence 1013 cMhvSB062a03

Table 1

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Sequence 1014 cMhvSB062d12
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Sequence 1016 cMhvSB073e03
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Table 1

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CTGCACTCCAGCCTGAGTAACAGAGTAAGACTCTGTCTCAAAAAAAG
Sequence 1031 cMhvSB024c09
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Sequence 1032 cMhvSB026e11
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AGGGNCNNNAAAACNNNGNGGGGNNGGGCCCCNAAAANGGGNNNGGGGNNNAAAAANNNTTTT
TNNNNANANNTNTNGGNNNNNNAAAAAAANNNTNNTTTTTTAAAAAAA
Sequence 1033 cMhvSB027h04
TGGATATCTGCANAATTCGC
Sequence 1034 cMhvSB029c09
CCCTTTCGAGCGGCCGCCCGGGCAGGTACGCGGGATNCNCACATGATCACACAC
Sequence 1035 cMhvSB031g11
CCCTTANCNNNGGCCCNNCCGACGNNCANGAGTGCTCTTNTGCAGGCCACAGGGG
Sequence 1036 cMhvSB041e10
GGGCGAATTGGAGCTCCCCGCGGTGGCGGCCGAGGCACTTTTTTTTTTTTTTTT
Sequence 1037 cMhvSB051c05

Table 1

TCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTTTTTTTTTTTTTTTTTTTGAGACAGACTTTTGCTCT
TATTGCCCAGGTTAGAGTACAGTGGCACGATCTCAGCTCACTGAAACCTCCGCCTCCCGGGTTCAA
GCAATTNTCCTGCCTCAACCTCCCAAGTAGCTGGGATACAGTTGCCTGCCACCACACCCAGCTACT
TTTTGCATTTTTAGTANAAATGGGGTTTCACCATGTTGGCCAGGCTGGTCTTGAATTCCTGACCCCA
TGATCCACCCTCCTTGGCCTCCCAAAGNGCTGGGATTACAGGCGTGAGCCACTGAGCCTGGCCAAT
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NAAACTTAAACTTTTCTTGGNAATCCAATTAAAAATGTANNTCTTAGCTGGGCCAGGNGGGCTCAC
CCCCTNTAATCCCAGCACTTTGGGGNGGCCCCGGGGGGG
Sequence 1038 cMhvSB058b12
TTGGAGCTCCACCGCGGTGGCG
Sequence 1039 cMhvSB065b03
ACTTTTTTTTTTTTTTTTTTTTTTTTTTGGGGGNACNNGTTTTNGGGGCNNNNNCNGGGNNNGGGGGG
GGCCCCCCCNANGGGGGNNGGGGCNTNNAANNNTTTTTNNNNNNCNNTNTGGGGNCCCAAAAA
ANNNNNNNNNTTTTTAAAAAA
Sequence 1040 cMhvSB071c08
CCGGGCAGGTACTTTTTTTTTTTTTTTTTTTTTTTTTTAAANNNGGGGAANGNTTNNNGGGCNNNNN
NNNGNNCNGGGGGGGGGCCCCCNNAAAGGGGNCCGGGNNNNNNAANNGNTTTNNNNNNCNGN
NNTGGGNNCCNAAAAAANNANNNGGNNTTNNAAAAAAAA
Sequence 1041 cMhvSB073f02
GGAGCTCCACCGCGGNGGCGGCCGAGGTACTTTTTTTTT
Sequence 1042 cMhvSB079a09
GATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTTTTT
Sequence 1043 cMhvSB082h09
AGCTCCCCGCGGTGGCGGCCGAG
Sequence 1044 cMhvSB083h06
GGCNAATTGGAGCTCCCCGCGGTGGCGGCCGAGGTACTTTTTTT
Sequence 1045 cMhvSB087a11
CGGCCGCCCGGGCAGGTACAGCTACTTTGGAGGACAGTGTGGTGGTCTCTCATAATCCTAAACATA
CTCTTAGAATATGAACCAGCAACACTGCTCCCCAGTATTTACACAGATGGGTTGAAAACTTCTGCC
CACAAAGAAATCTGCACGTGCACGTTTATGGCAGCTTTCTTTATCACTGCCAAAAACTTGGAAGGA
ACCAAGATNTCCTTCAATAAATGTCTTACTACATTCTGGTTGTTGTAACAAAATACCATACACTGC
GTANCTGAGGCAGGAGGATCACTTGA
Sequence 1046 cMhvSB092a03
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Sequence 1047 cMhvSB093e09
TGGAGCTCCCCGCGGTGGCGGC
Sequence 1048 cMhvSB094g10
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CCCCACAAAGGGNNCCGGGCNNANNAANNNTTTTTANNAACAGGNATGGGNACAAAAAAATAN
CNNNNGNTTTTAAAAAAAA
Sequence 1049 cMhvSB095f07
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Sequence 1050 cMhvSB096a12
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AANNNAAANTTTTAAA
Sequence 1051 cMhvSB104f02
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Sequence 1052 cMhvSB031h10
CCCTTANCNNNGNCNNGGCCGACGTNCTNAGCTCCACAAACGTGGNCNTGGTTGGTGCGGAANTG
ATTGTGAGTGANCAGGTAA
Sequence 1053 cMhvSB038d03
CCCTTAGCGTGGTCGCGGCCGAGGTACTTTTTTTTTTTTTTT
Sequence 1054 cMhvSB038h12

Table 1

CCCTTTCGAGCGGCCGCCCGGGCAGGTACTTTTTTTTTTT
Sequence 1055 cMhvSB094a12
TCCCCGCGGTGGCGGCCGAGGTACTTTCATNNNTTTTACACCTACCTTTTTCTGGGNNGGGNTNTN
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GCTAGGGCTACAAANNGTCTNCTGAAGATACAAAACCAGCGTGGCT
Sequence 1056 cMhvSA002a07a3
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ATACACATTTGAAGAAAAATGCTGTTGAAGAAATGTATCCATAAAACACTTCAGGTCAAAAAGCA
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ATACTTTCAATGATTAGATTCCTTANCTTAAAAAAAAAA
Sequence 1057 cMhvSA002a07a4
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Sequence 1058 cMhvSA002b04a4
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AATAATCTTGATGAGCTTCTTCTCTTCATGATCTTTCCAATGCTGTTATAATTTTGAGGGAATTACT
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Sequence 1059 cMhvSA002b09a3
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Sequence 1060 cMhvSA002b10a4
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Sequence 1061 cMhvSA002b11a4
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AAAAGATTAAATAATAAAAATA
Sequence 1062 cMhvSA002c03a3

Table 1

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AGGGGCCAAGGGGGANGAAAAACGGGTGTTTNTGGTTTTAAGNNCAAGGTCGTAANATTGGNTCA
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CCTTGTTTGCANTTTNTAAAAAACCATGGGGTNATTAAACCTTTGGGGCCNTTTTAAAGGGGCCAT
TATTTTTCCTTTTTAAAA

Sequence 1063 cMhvSA002c11a3
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TTGGAGCGGCCCCTGGGGTCTTGGGTGTGCAGCACGGATCACGCGAGACCCCTGAGACCTCAAAT
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CCAA

Sequence 1064 cMhvSA002c11a4
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GGGTGTGCAGCACGGATCACGCGAGACCCCTGAGACCTCAAATCATCTAACGTGAAGCCACAGAC
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AGTTGGAAAACATCATGAATTTGAATACTTCAAGTAATACTGGTGATACCCAAAAGGTTGAAGAA
TGCCTCATTGGATGTAAAACAAATACTTAAAA

Sequence 1065 cMhvSA002e02a3
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AAATAAACAAAAATCCGTGACTACCTAGGGTTGCTAGGATTGCTTAAGAAGAGTCTAAAGTTCTGT
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Sequence 1066 cMhvSA002e03a3
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Sequence 1067 cMhvSA002e08a3
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ATAC

Sequence 1068 cMhvSA002e08a4
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Table 1

Sequence 1069 cMhvSA002f05a4
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CGTGTGATCTGTACACCCCATC
Sequence 1070 cMhvSA002g10a4
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Sequence 1071 cMhvSA002g11a3
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Sequence 1072 cMhvSA002h09a3
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Sequence 1073 cMhvSA002h11a3
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Sequence 1074 cMhvSA003a06a4
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Sequence 1075 cMhvSA003b01a3
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Sequence 1076 cMhvSA003b05a4
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Table 1

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Sequence 1078 cMhvSA003e01a3
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Sequence 1079 cMhvSA003e05a3
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Sequence 1082 cMhvSA003f04a4
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Sequence 1083 cMhvSA003g07a4
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Table 1

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Sequence 1084 cMhvSA003h01a3
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TGCCACGAAGAACGGCTGGGACAGGAAGCGCTGGATCTTACGAGCACGCGCTACCACCAGTTTGT
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G
Sequence 1085 cMhvSA004a09a3
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Sequence 1086 cMhvSA004b04a3
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Sequence 1087 cMhvSA004b06a3
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Sequence 1088 cMhvSA004d06a3
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Table 1

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GCTGTGACTGTCACTGCCCATGTGTTCTTCCCCATGCCTNCCTTCCTCCTCCAAGTGCGTGAAACAT
CAATGAACCTTG
Sequence 1092 cMhvSA005b11a3
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CTNACACAATGA
Sequence 1093 cMhvSA005c01a3
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Sequence 1095 cMhvSA005d06a3
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Sequence 1096 cMhvSA005e08a3
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Table 1

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ATACGAAAAAAAAAAAGGAAGGAAGGAAAAAA
Sequence 1100 cMhvSA009e06a2
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Table 1

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Sequence 1113 cMhvSA031c02a4
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Table 1

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Sequence 1115 cMhvSA031g06a4
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Sequence 1121 cMhvSA032e07a3
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Table 1

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Table 1

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Table 1

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Table 1

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Sequence 1147 cMhvSA041e05a3
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Table 1

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Sequence 1155 cMhvSA057e10a1
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Table 1

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Sequence 1168 cMhvSA062d06a1
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Sequence 1169 cMhvSA062e11a1
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Table 1

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Sequence 1170 cMhvSA062f03a1
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Sequence 1171 cMhvSA062g09a1
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TAAATTGCACTGCC
Sequence 1172 cMhvSA062h07a1
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Sequence 1173 cMhvSA062h09a1
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Table 1

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Sequence 1178 cMhvSA037e06a3
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Sequence 1179 cMhvSA054c03a1
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Sequence 1180 cMhvSA002b03a3
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Sequence 1182 cMhvSA002b04a3
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Table 1

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Table 1

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Sequence 1192 cMhvSA003h02a3
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Table 1

Sequence 1197 cMhvSA010c03a3
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Sequence 1202 cMhvSA018f01a3
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Table 1

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GGAAGGCAAAACAACCTTGA
Sequence 1206 cMhvSA031c11a4
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AAATAAAACGAGAAGGTAGATAAGAATGGAAAGAATACTAGAAGACAGCCTGCCATGAGGTTAT
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Sequence 1207 cMhvSA031h04a4
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Table 1

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Sequence 1212 cMhvSA033c08a3
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AC
Sequence 1213 cMhvSA033h10a3
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Sequence 1216 cMhvSA037e03a3
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GCAGTCTCTTCTGTCCCGCTGGAACC
Sequence 1217 cMhvSA041a12a3
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Table 1

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Sequence 1225 cMhvSA057a05a1
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Sequence 1226 cMhvSA057a12a1
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Sequence 1227 cMhvSA057f05a1
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Table 1

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Sequence 1229 cMhvSA058d09a1
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Sequence 1230 cMhvSA058g06a1
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GTTCCTTA
Sequence 1231 cMhvSA059f04a1
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Table 1

Sequence 1235 cMhvSA041g12a3
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Sequence 1236 cMhvSA003e12a3
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Sequence 1237 cMhvSA002c10a3
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Sequence 1242 cMhvSA002f05a3
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Table 1

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Sequence 1244 cMhvSA032e04a3
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Table 1

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Table 1

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Table 1

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Table 1

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Table 1

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Sequence 1280 cMhvSA049h10a1
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TGCTGAAAACCTCCCAATGAGTTAGGATGTTAGGCTCTCAAAGCACTTAACAGCCTAACTCCATCC
CATGACCTCGGGCCCTCCTTGCTCTTTTCCCACCTTTCCCTCATTGCTTCTTACCTCGGGTCCAGCCA
CAATGGTTTCCTTTCTGTTTCCTGAACAACTCAGACCTTTTCCAGTCTTAGGACTTTTGCTGTTGTTC
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Sequence 1281 cMhvSA058c10a1
CCCTTAGCGTGGTCGCGGCCGAGGTACTAGCAGAATTCAGCTCCTGCAGTGATAGGACTGAGGTCC
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TCCTCAGCTTCTGACCTCTAAATACAGGTTTAAAGGGCTCTGGCAAATGGGTCAAGCCCACTGACA
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TCTACCTACCACAATTTACAAGGAAA
Sequence 1282 cMhvSA018c01a3
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TCAGACAATAAATCCCCCTTTACTCATTAATGAGAAAATAAATTTAGGGCCAGANGTGTCAGACTT
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Sequence 1283 cMhvSA031e06a4
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Sequence 1284 cMhvSA041b10a3
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Sequence 1285 cMhvSA003e11a3
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TCAAGACGGACATAATTGGATTTTTTTTGCCATGGCCTGGAAAGAAAGGTACCTCGGCCGCGACCA
CGCTAAGGG
Sequence 1286 cMhvSA010a03a3
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Table 1

AAATCCCACCCTTCGCCGCAGGTGGATTCTCCTCCCCTAGAGCTACTGTCCAGTTGCTACTGGCCTC
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Sequence 1287 cMhvSA033d05a3
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NCCNTTTTTTAANTTTTTTTAAAANNNANGNTNCNTNNTNNCNNNTTTNAAAAAAAAA
Sequence 1288 cMhvSA050h05a1
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Sequence 1289 cMhvSA057b06a1
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Sequence 1290 cMhvSA010h05a3
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Sequence 1291 cMhvSA037a03a3
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CCCTGTCTCTAATATAATTTAAAAAAAAAGAA
Sequence 1292 cMhvSA033h12a3
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Sequence 1293 cMhvSA032e06a3
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CACGCTAAGGG

Table 1

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TACCTCTTTTTCTGTCTCCCTCCACTACACTGTAAATACTAAAACAGGACACTGTTTCGTTTGTCTTT
GTATTCCAAAACGCAAGCACAGTACCTGCCCGGGCGGCCGCTCGAAAGGGCGA
Sequence 1295 cMhvSA010g09a3
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TTGCCCTCTATGTGTCCGTGTGTTTTCATCATTTAACTCCCACTTATAAGTGAAAACATGTTAAGTA
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CAGTTATTTTTTTTCATATTATATCCATAGTTGTGTTTTTA
Sequence 1296 cMhvSA032b04a3
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ATACTACATAAGAAGCAAGACCACAGACTCAAGACGGACATAATTGGATTTTTTTTGCCATGGCCT
GGAAAGAAAGGTACCTGCCCGGGCGGCCGCTCGAAAGGG
Sequence 1297 cMhvSA018a09a3
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GGCGGATCA
Sequence 1298 cMhvSA002e01a3
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Sequence 1301 cMhvSA054c01a1
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Table 1

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Sequence 1303 cMhvSA054d07a1
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Sequence 1304 cMhvSA037h01a3
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Sequence 1305 cMhvSA054a02a1
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Sequence 1306 cMhvSA032g01a3
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Sequence 1309 cMhvSA002a06a3
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Sequence 1310 cMhvSA058f01a1
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Table 1

Sequence 1311 cMhvSA032g06a3
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Sequence 1312 cMhvSA031e05a4
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Sequence 1313 cMhvSA002d05a4
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Sequence 1317 cMhvSA062c08a1
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Sequence 1318 cMhvSA003e10a3
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Sequence 1319 cMhvSA054c09a1
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Sequence 1320 cMhvSA058d08a1
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Sequence 1321 cMhvSA010c06a3

Table 1

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Sequence 1322 cMhvSA002a11a4
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Sequence 1323 cMhvSA032g09a3
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Table 1

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Sequence 1329 cMhvSA003d09a3
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Table 1

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Sequence 1336 cMhvSA024c01
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Sequence 1337 cMhvSA032d03
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Table 1

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CAACNTTCTTTTGNATT
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Table 1

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Table 1

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Sequence 1355 cMhvSA009c07
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Table 1

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Table 1

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Table 1

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Table 1

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Table 1

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SEQUENCE LISTING

<110> Millennium Pharmaceuticals, Inc. et al.

<120> NOVEL GENES, COMPOSITIONS, KITS, AND
METHODS FOR IDENTIFICATION, ASSESSMENT, PREVENTION, AND
THERAPY OF BREAST CANCER

<130> MRI-032PC

<150> US 60/285,163
<151> 2001-04-20

<160> 1417

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 831
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 22, 415, 457, 465, 638, 668, 669, 715, 750, 783, 786
<223> n = A,T,C or G

<400> 1
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ccctcacctg tgaagtggat gcccttaaag gaaccaatga gtccctggaa cgccagatgc 120
gtgaaatgga agagaacttt gccgttgaag ctgctaacta ccaagacact attggccgcc 180
tgcaggatga gattcagaat atgaaggagg aaatggctcg tcaccttcgt gaataccaag 240
acctgctcaa tgttaagatg gcccttgaca ttgagattgc cacctacagg aagctgctgg 300
aaggcgagga gagcaggatt tctctgcctc ttccaaactt ttcctccctg aacctgaggg 360
gaaactaatc tggattcact ccctctggtt gatacccact caaaaaggac acttntgatt 420
aagacggttg aaactagaga tggacaggtt atcaacngaa acttntcagc atcacgatga 480
ccttgaataa aaaattgcac acactcagtg cagcaatata ttaccagcaa ggaataaaaa 540
gaaatccata tcttaaagaa acagctttca agtgcctttc tgcagttttt tcaggagccg 600
caagatagat tttggaatag gaaataagct ctagtttntt aacaacccga cacttctaca 660
agatttanna aaaaagttta ccaacaataa tctaagttta cagaaaaaat cttgngctat 720
aaatactttt taaaaaggga ttttgaatan ccattaaaaa ctgccttttt tttttccagc 780
aangtnttca accaactttg ggttctggtt taataaaatt tttggaaaaa a         831
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<210> 2
<211> 895
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 24, 30, 52, 55, 357, 503, 514, 527, 529, 531, 570, 613,
614, 621, 623, 627, 640, 646, 664, 671, 673, 678, 691, 693,
695, 698, 700, 712, 719, 731, 734, 740, 744, 745, 749, 751,
763, 766, 770, 787, 789, 790, 795, 799, 801, 808, 809
<223> n = A,T,C or G

<221> misc_feature
<222> 819, 823, 825, 832, 844, 847, 856, 857, 858, 859, 870, 871,
873, 874

<223> n = A,T,C or G

<400> 2
nggcgaattg gagctccccg cggnggcggn cgaggtacac agtcagtgtg gntgncttgc 60
acgatgatat ggagagccag cccctgattg gaacccagtc cacagctatt cctgcaccaa 120
ctgacctgaa gttcactcag gtcacaccca caagcctgag cgcccagtgg caccacccaa 180
tgttcagctc actggatatc gagtgcgggt gacccccaag gagaagaccg gaccaatgaa 240
agaaatcaac cttgctcctg acagctcatc cgtggttgta tcaggactta tggtggccac 300
caaatatgaa gtgagtgtct atgctcttaa ggacactttg acaaagcaga ccagctnaag 360
ggagttgtca ccactcttgg agaatgtcag cccaccaaga aagggctcgt gtgacaagat 420
gcttactgga gaccaccatc accattagct ggagaaccaa gactgagacg atcactggct 480
tccaaagttg atgccgttcc aanccaatgg gccnagactt caattcnana naaaccatta 540
agccagatgt cagaagcttc cccattacan gtttacaacc aggcccttgc tacaaagaat 600
ctaccctgtc ccnngggccg ntntagnaac tagggggatn cccccnggcc tgggagggaa 660
tttngatttt nanccttntt cgattacccg ncnanccntn tagggggggg gncccgganc 720
cccacctttt nttncctttn ttgnngggnt naatttgggg ggnttngggn aaataatggg 780
aataaantnn ttccntggng naaattgnnt tcccctccna ttncnaaaaa anaaaaaccg 840
gggnaanaaa aagtannnng ggggggccn nanngcccc cccccccccc ccccc 895

<210> 3
<211> 864
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 542, 613, 637, 640, 642, 643, 664, 666, 688, 700, 713, 715,
722, 734, 740, 742, 743, 753, 754, 762, 764, 765, 774, 776,
785, 787, 788, 790, 792, 797, 798, 833, 838, 847
<223> n = A,T,C or G

<400> 3
ccccgcggtg gcggcccgag gtacaacaaa gcaatgttac cttaccatag gccttaattc 60
aaactttgat ccatttcact ccaatgacgg gagtcaatgc tacctgggac acttgtattt 120
gtaaattctg atttagctta ttgtagactt gtgcctactt tgtcatgagg gtttgacttc 180
tgcattcttc gtggctttcc ttcctttggc ttaggtttgc taaagctaga agattcaatt 240
gctctttaca gacttatgag gaagatagac tttgtaacgc agatgtcact tctcatgcca 300
ccctgccctg gttagctctt ctggaggaat actgcagata agaaaaatag ttatttggga 360
ggctccctca agtgtggtag gaattgagac taacacaatt ttggttaaag tccactgagg 420
tatgagttta tagaactcca ctgtatgtat ccagctatac taaaacattt tgccaagaca 480
ctggaggact ctttcattat ctactgggaa agaataagac ttagaggctt tttaataagt 540
tnctgggatt gggtggggta aaaatcatgg agttaaaaaa agacttgggg ggagaaagga 600
aaacctgtta aangttacat ttaattttgg aatttcnccn cnnttgtcaa ccttacttac 660
aggntncaat ggccaaataa aaagttanaa aaagtttggn agaaatgctt tcnangtttt 720
tnaaaagaac caanggaccn tnngccccct ttnnaaaaaa ananngaacc cccncncggc 780
cgggnanntn tntttannct tttttttccc cccccccccc tggggggggg gcncggcncc 840
cctttnttc cctttttggg gggg 864

<210> 4
<211> 524
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 358, 365, 368, 386, 391, 404, 408, 414, 484, 524
<223> n = A,T,C or G

<400> 4

ccgcggtggc ggccgaggta ctccaggccg ggactcaggt tatcaaaagt gcaggagctc 60
tgatcagcat ggaccacttc ttccaaagaa tttccctgct ggccgtttgt aggggttgtg 120
gtaattctat aaccagtaat gtctggggtg gtgctcctct cccaggagac tgtgagcact 180
ccagtgtcag ggtttgcctc cagatgcaag tttgttggtg gagacaatgg tgtcaccact 240
ttgtttacaa ttggcgcatc tctttcctgt ccatctctca ggacttggat ggtgtagacg 300
tattctactc ctggagtcaa gccggacaca acgatgcttt ctgagtctga aagtcacntt 360
ttcgnggngc ctttccttcc ctggcnttgg nccgaaccct cggnccgntt ttanaactta 420
gtggaatccc ccgggcttgc aaggaaattc aatatcaaac cttatccgat acccgtcaac 480
ctcnaggggg ggggcccggt acccaacctt ttgttccctt taan 524

<210> 5
<211> 658
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 384, 390, 455, 505, 553, 554, 584, 589, 614, 621, 622, 624, 630, 632, 634, 638, 641, 643, 650, 656
<223> n = A,T,C or G

<400> 5
ttagggcgaa ttggagctcc ccgttgtggc ggccgaggta ctgtggatat ttaaaatatc 60
acagtaacaa gatcatgctt gttcctacag tattgcgggc cagacactta agtgaaagca 120
gaagtgtttg ggtgactttc ctacttaaaa ttttggtcat atcatttcaa aacatttgca 180
tcttggttgg ctgcatatgc tttcctattg atcccaaacc aaatcttaga atcacttcat 240
ttaaaatact gagcggtatt gaatacttcg aagcagaaca ggcaatgtgc agccctcatt 300
tatgagaaaa ccctcaggaa actcccaggg tgatgcttgg agaagctgtg agttgagctg 360
aagctggaga actttcctcc aganccaaan ggctttaaga aaggaaagga agaactctta 420
acctgggttc tgcttaacat cactccaagt ttaanaatgg gatcttggcc agaaaagacc 480
atgcctttgt tcctctggaa ttggnaaaag aatgatttac tctccgggaa tcttctctgt 540
caacctgtac ctnncccgct ctaaaactag ttggatcccc cggncttcna ggaattccat 600
atcaaacctt atcnataccc nncnacctcn angngggncc ngntacccan cttttntt 658

<210> 6
<211> 508
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 485, 497
<223> n = A,T,C or G

<400> 6
aatacgactc actatagggg cgaattggag ctccccgcgg tggcggccga ggtacccaga 60
agtgtcctgg aatggggccc atgagatggt tgtctgagag agagcttctt gtcctacatt 120
cggcgggtat ggtcttggcc tatgccttat gggggtggcc cgttgtgggc ggtgtggtcc 180
gcctaaaacc atgttcctca aagatcattt gttgccaaca ctgggttgct gaccagaagt 240
gccaggaagc ttaataccat ttccagtgtc atacccaggg tgggtgacga aaggggtctt 300
ttgaactgtg gaaggaacat caagatctct ggtccatgaa aattggggtg tggaagggtt 360
accaattggg gaaagctcgt ctgtcttttt ccttccaatc aagggctcct cttctgatta 420
ttcttcaggg caatgacata aattgtatat tcggttcccg gttccaggcc agtaataata 480
gcctntgtga caccaanggc ggggccca 508

<210> 7
<211> 361
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 48, 54, 65, 91, 93, 94, 95, 116, 121, 127, 134, 137,
140, 145, 146, 156, 162, 163, 193, 210, 222, 232, 234, 295,
296, 303, 306, 309, 313, 325, 337, 345
<223> n = A,T,C or G

<400> 7
cctgccgacg tacttntgaa caattatctc ctcctgatca ctatttcnta cttngcttta 60
aaaanccaaa gttcacaaag agagggggag nannnggggg acttttattc caatanaaaa 120
natggantaa gttntanggn agaannttgt tcagtncgga tnnaaatctc tatgaaaagt 180
aaattccttg atnactggta tgactataan tctctgttat cngatacgag gnanaaactg 240
caagctgact agcatgttct gagaatcagc cattcctaaa aattttataa acacnngata 300
ctntanacng ganaatggga ccgcncccaa taaacanata tttgngaaaa atgcatccac 360
a 361

<210> 8
<211> 687
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 115, 161, 464, 630, 649, 683
<223> n = A,T,C or G

<400> 8
actcctatag ggcgaattgg agctccccgc ggtggcggcc cgaggtactc atccctactg 60
ttatagctgg agaggatttg ggtattgaag cagggagggg cagatcccac gaatngactg 120
cagatctgga ataataagta aggggtaga tctgcccata nagctcactt taaccggcct 180
atactcctac aaggaattgg ggtagggatc ttctactcag ccttgccaca atagaatggc 240
caatgccctt ctagtatgtt tggtgaaggt cttgaaggcc catttccccc atccaccctg 300
ggggagaaat tgagtcccta aagtcaacga caaggcttat tgaggctgag tttgcaacag 360
atcccgatct gggaggtaga aacaaaaatg actgaacatc tttttatccc ccaatcgtta 420
caaagcctaa ataactctaa acgggatggg agggcaaatt ttangtcaag ttgacatcct 480
ggagaaaata tcctaggtcc tgtctcattc cctagaccgc ataacactcc aacccgtgta 540
aatctcaagg acccttgaaa aagacagtgg gtaggggaag aaggaagggg agctagcttt 600
ccaacctact ccacacttga cttcccatan gacaaccagt aagtgtaang ggcatttgca 660
aaatcaagtg gaaagtcctt ggncgct 687

<210> 9
<211> 573
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 508
<223> n = A,T,C or G

<400> 9
cgaggtaccg gagacaggtg cagtccctca cctgtgaagt ggatgccctt aaaggaacca 60
atgagtccct ggaacgccag atgcgtgaaa tggaagagaa ctttgccgtt gaagctgcta 120
actaccaaga cactttggcc gcctgcagga tgagattcag aatatgaagg aggaaatggc 180
tcgtcacctt cgtgaatacc aagacctgct caatgttaag atggcccttg acattgagat 240
tgccacctac aggaagctgc tggaaggcga ggagagcagg tagggaactc agacttggat 300
gcgtgaacta atggtgacca tttgttaggc cctgtgccac tgggctctaa gcagtgtcac 360
atttaatctt tagaaagttt ctttgaggta actgctttcc actttttgta gaggaggaat 420

ttgaattgag agagagtaag tgacttgctg aaaaagggtt aatcaacagc agagctggga 480
tttgaaccca taactctgtc aaagcctnca ctcctaactc ctgttcatgc tctgtggaga 540
aaatgcttgt agtacatatt ttaaatgtac ctt 573

<210> 10
<211> 290
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 5, 7, 8, 9, 12, 15, 18, 20, 29, 32, 37, 39, 43, 45, 49,
51, 54, 60, 65, 71, 75, 79, 87, 90, 91, 99, 101, 111, 114,
115, 116, 117, 118, 126, 130, 133, 136, 137, 177, 180, 265
<223> n = A,T,C or G

<400> 10
gntcncnnnt gncgnaantn tatatagcnc tnatctntnc ggnancacnt ncangggggn 60
ccccngcacc nactnttcnt acccttnatn nagggttant ngcacgcttg nccnnnnnat 120
ggacanactn tanttnntga gctcactgga tatcgagtgc gggtgacccc caagganaan 180
accggaccaa tgaaagaaat caaccttgct cctgacagct catccgtggt tgtatcagga 240
cttatggtgg ccaccaaata taaantgagt gtctatgctc ttaaggacac 290

<210> 11
<211> 373
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 137, 238, 242, 254, 274, 333, 343
<223> n = A,T,C or G

<400> 11
ggagctcccc cgcggtggcg gccgaggtac tcagaagtgt cctggaatgg ggcccatgag 60
atggttgtct gagagagagc ttcttgtcct acattcggcg ggtatggtct tggcctatgc 120
cttatggggg tggccgntgt gggcgggtgg tccgcctaaa accatgttcc tcaaagatca 180
tttgttgccc aacactgggt tgcttgacca gaagtgccag gaagctgaat accatttnca 240
gngtcatacc cagngtgggt gacgaaaggg gtcntttgaa ctgtggaaag gaacatccaa 300
gatctctggt ccatgaagat tggggtgtgg aanggttacc agntggggaa gctcgtctgt 360
ctttttcctt cca 373

<210> 12
<211> 516
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 161, 185, 216, 342, 354, 361, 363, 386, 410, 422, 441, 454
<223> n = A,T,C or G

<400> 12
cgactcacta taggggcgaa ttgggagctc cccgcggtg gcggcccgag gtacctgttc 60
gcattgcaga atataaaact tggtttacac tctataaaaa ataaccaata tccaaattca 120
agagagctag cattcacaga acacacaata tgggtgtgta nctactgttc accagcctca 180
ggctngattt aaacaaacaa acaaaaaaaa aatttnaaag ggatcattca agatgaccgt 240
ataatgcttg ctgctgtctt tgcaaattaa ggtttgcttt tcaagtgcat gattttaaca 300
taaggcctgg gctctctgca cctagtgagg tgtgaggctc tnttgcccac agtncacact 360

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ntnacttaac taagccagag ttgggnggca ttattaaatt atcactggtn ttcttaatag 420
tnaaaatggg ggaacccaga nggcaggaaa tttncattcc ctatatttgg ggctaaacct 480
aaaagagtat atccctttca aagagcttaa gtgcct                           516

<210> 13
<211> 52
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 32, 44
<223> n = A,T,C or G

<400> 13
tganggaatt cgatatcaaa gcttatcggt tnccggccac ctcnaggggg gg         52

<210> 14
<211> 765
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 55, 63, 64, 68, 71, 84, 87, 88, 91, 93, 94, 110, 115,
126, 156, 167, 176, 197, 203, 204, 211, 217, 219, 225, 230,
236, 238, 239, 240, 253, 272, 277, 282, 284, 285, 290, 294,
298, 303, 309, 312, 366, 408, 494, 536, 576, 591, 611
<223> n = A,T,C or G

<221> misc_feature
<222> 645, 705, 711, 729
<223> n = A,T,C or G

<400> 14
cgcggtggcg gccgaggtac cggagacagg tgcagtccct cacctgngaa gtggntgccc 60
ttnnaggnac nactgagtgc ctgnatnncc ngnntccacc aagaggtgcn acctncaaca 120
tcatantgct ggtaactacc aagacactat tggccngcct gcaggangag attcanaata 180
tgaaggagga aatggcncgt aanntttgag nataccnana cctgnttaan ggttanannn 240
cccttgacat tgncaatgcc acctacggga anctgtngga angnnaggan agcnagantt 300
ttntgcctnt tncaaacttt tctcccttga acctgagggg aaactaatct ggattcactt 360
ccctcnggtt gatacccact caaaaaggac acttttgatt aagacggntg aaactagaag 420
atggacaggg ttatcaacga aacttctcaa catcaccgat gaccttgaat aaaaattgcg 480
caccctcagt gcangcaata tatttccagc aagaataaaa aagaaattcc atatcntaaa 540
gaaacagctt tcaatgcctt tctgcagttt tttcanggag ccgcaagatt nattttggga 600
atagggaatt naagctttta gtttcttaac aaaccgacac ttctnaccaa gatttaataa 660
aaaaagtttc aaccttaatc ttagtttaac agaaaaaatc ttggngctta naatactttt 720
taaaaaggna tttttggaat cttattaaaa actggttttt ttttt                 765

<210> 15
<211> 444
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 284, 429, 442
<223> n = A,T,C or G
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<400> 15
ccgcggtggc ggccgaggta cgatatacga agactctgag ctgtttgcct ccgatgggtt 60
tccaagtatt ttgcccgttg taagctcatt aagggccaac ttttactttc aatatgtgat 120
tctgcagaat taatttaagg aggcgctgat catgctgaga gtatcaatca gaaaaatgca 180
tttattcaca ggtgccagca aagtgtattc tccatctggc ctcaaaacag atgcccagcc 240
taattgggcc acaaagatcc cgtgaaggtg gttttgctgg tttncaagcc agctcaataa 300
cttggtttgg cagaatcaag gaattaagga cctgatcaat caaatgggat cacaccatta 360
tttgtcacaa tatccctttt tggtcaccat tttgaattcc attaactggt atactgtcac 420
cgtcacatnc tatctcaatt gnat 444

<210> 16
<211> 507
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 26, 145, 403
<223> n = A,T,C or G

<400> 16
attggagctc nccgcggtgg cggccnaggt cctgttcgat tgcagaatat aaacttggtt 60
tacctctata aaaataccat atcaaattca agagagctag catccagaac accaatatgg 120
gtgtgtagct ctgtcaccac ctagnttgat ttaaacaaac aaacaaaaaa aaaatttcaa 180
agggatcatt caaagatgac ccgtataatg cttgctgctg ctttgcagat taagggttgc 240
ttttcaaagt gcatgatttt aacataaggc ctgggctctc tgccctagtg aggtgtgagg 300
ctctcttgcc acacagttca cactctactt aactaagcca gagttggtgg cattatttaaa 360
ttatcactgg tcttcttaat agtaaaaaat ggggaaccca ganggcagga aatttccatt 420
accctatatt ggggctaaac ttaaaaagag tatatccact atcaagagct tagtcctcgg 480
ccgctctaga actaagtgga tcccccg 507

<210> 17
<211> 456
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2
<223> n = A,T,C or G

<400> 17
tnctataggg cgaattggag ctccccgcgg tggcggccga ggtactgtgg atatttaaaa 60
tatcacagta acaagatcat gcttgttcct acagtattgc gggccagaca cttaagtgaa 120
agcagaagtg tttgggtgac tttcctactt aaaattttgg tcatatcatt tcaaaacatt 180
tgcatcttgg ttggctgcat atgcttttcc tattgatccc aaaccaaatc ttagaatcac 240
ttcatttaaa atactgagcg gtattgaata cttcgaagca gaacaggcaa tttgcatctt 300
ggttggctgc atatgctttc ctattgatcc caaaccaaat cttagaatca cttcatttaa 360
aatactgagc ggtattgaat acttcgaaag cagaacaggc aaatgtgcag ccctcattta 420
tgaagaaaac ccttagggaa acttccaggg gtgatg 456

<210> 18
<211> 307
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 87, 95, 126, 136, 143, 153, 157, 181, 185, 186, 192, 195,

200, 210, 212, 220, 232, 233, 237, 242
<223> n = A,T,C or G

<400> 18
tccccgcggt ggcggccgag gtacagtcct gattgcatca taattgtggt ttccaaccca 60
gtggacattc ttacgtatgt tacctgnaaa ctaantggat tacccaaaca ccgcgtgatt 120
ggaagnggat gtaatntgga ttntgctcta tancacnacc ttatgcgctg agaaacttga 180
ncatnnatcc cnccntggtn acatggatgn antatggctn aacccaacct anngatnact 240
cntgctttga cccctacacg aatgtctgaa tcaggcttta aactgttgtg ccagtgctta 300
ggctttg 307

<210> 19
<211> 133
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 116
<223> n = A,T,C or G

<400> 19
gggcgaattg gagctccccg cggtggcggc cgaggtacac agtcaatgtg gttgccttgc 60
acgatgatat ggagagccag cccctgattg gaacccagtc cacagctatt cctgcnccaa 120
ctgacctgaa gtt 133

<210> 20
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 113, 124, 141, 169, 192, 196, 210, 223, 231, 242, 243, 258,
260, 273, 276, 281, 283, 292, 295, 298, 307, 331, 332, 334,
339, 340, 342, 343, 344, 345, 350, 352, 356, 357, 359, 366,
369, 373, 381, 402, 407
<223> n = A,T,C or G

<400> 20
ttagggcgaa ttggagctca ccgcggtggc ggccgaggta cgtcacgcag ggcagcacgt 60
gaggtcaagg cttggaaaca tccacataga tttggacatg ctgttcctga atntgagcct 120
gcanctcctg gatttcctct ncgtggagtt tcttcaaaaa ggcaatctnt tcttgcaaag 180
attccacttt gngttnaaag gccaagaacn tgccaaaaga ccnaatttgt naacaatcct 240
gnncttgaaa agaattgnan ggtggttttc ggnttnctct ntntgaagca tntgnctnct 300
gcaattnctc ccggaggcgc atgatgacct nngncaggnn gnnnngctcn anctcnncnc 360
gggctntgnc gantggttag ntggtccacc tgcccgggcg gncgctngac tctagaacta 420
g 421

<210> 21
<211> 513
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23, 24, 30, 34, 38, 43, 44, 46, 51, 52, 55, 65, 68, 73, 78,
81, 82, 83, 84, 88, 90, 93, 104, 105, 107, 109, 113, 122,
123, 124, 125, 129, 130, 131, 132, 133, 134, 135, 139, 141,

143, 145, 146, 147, 149, 150, 152, 155, 161, 162, 172
<223> n = A,T,C or G

<221> misc_feature
<222> 178, 182, 184, 185, 186, 191, 192, 193, 200, 203, 205, 213, 215, 216, 219, 220, 224, 225, 230, 231, 234, 237, 239, 242, 245, 246, 251, 254, 258, 260, 262, 265, 266, 267, 269, 270, 272, 273, 274, 277, 292, 307, 310, 315, 318, 320, 321
<223> n = A,T,C or G

<221> misc_feature
<222> 350, 370, 379, 393, 410, 443, 465, 477, 494, 502
<223> n = A,T,C or G

<400> 21
ccgcggtggc ggccgaggta cannaactgn ttgnatanct agnntntcat nntgngaggt 60
aatancanca aanctaantc nnnnaaanan ctnatgtgca ttannantng gtngaatgtc 120
annnnaatnn nnnnnagtnt ngnannnann tnacnatcaa nntacaaagt gncttgangc 180
cngnnnggcc nnntgcacan tgnantgaca atncnngcnn ctgnnctgan nttnttnang 240
antcnnctgg natngatncn cnatnnnann tnnnttncct ggccaccaca cncaatacct 300
tgctggnatn atggnagncn ncacgtgcca ggattaccgg ctacatcatn aagtatgaga 360
agcctgggtn tcctcccana gaagtggtcc ctnggccccg ccctggtgtn acagaggcta 420
ctattactgg cctggaaccg ggnaaccgaa tatacaattt atgtnattgt cctgaanaat 480
aatcagaaag agcnagcccc tnattggaag gaa 513

<210> 22
<211> 371
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 17, 24, 43, 46, 51, 54, 60, 65, 66, 75, 81, 86, 88, 89, 99, 108, 110, 112, 139, 142, 144, 146, 148, 153, 157, 162, 169, 173, 188, 195, 207, 223, 224, 227, 233, 236, 251, 253, 272, 279, 283, 284, 293, 295, 297, 300, 303, 316, 327
<223> n = A,T,C or G

<221> misc_feature
<222> 329, 330, 342, 359
<223> n = A,T,C or G

<400> 22
gcggnggcgg ccgaggncca tttntacggg gagacaaaac ccnaanccccg nganacccan 60
gcaannacga cgaancgctg nttacngnna acgggaagna accgcccncn anaaaaaaga 120
caaagaacca ggcgcatana cnananangg ggngggncca angcccatnt gtncagggcc 180
ctttttcnga aaacngggca ccacaangaa aaaccccagc acnnggnaga acnggnacaa 240
aaagaccagc ngnggacaga aaacgacggc gncaaaagna agnngcccag ggnanangan 300
aanggaagga aggaanggcc gcccagnann agggcccaag gnccaagagg acgggacanc 360
gggcagcgag g 371

<210> 23
<211> 823
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 529, 584, 622, 633, 646, 661, 685, 691, 712, 713, 725, 731,

763, 798
<223> n = A,T,C or G

<400> 23
cgaggtaccg gagacaggtg cagtccctca cctgtgaagt ggatgccctt aaaggaacca 60
atgagtccct ggaacgccag atgcgtgaaa tggaagagaa ctttgccgtt gaagctgcta 120
actaccaaga cactattggc cgcctgcagg atgagattca gaatatgaag gaggaaatgg 180
ctcgtcacct tcgtgaatac caagacctgc tcaatgttaa gatggccctt gacattgaga 240
ttgccaccta caggaagctg ctggaaggcg aggagagcag gatttctctg cctcttccaa 300
acttttcctc cctgaacctg agggaaacta atctggattc actccctctg gttgataccc 360
actcaaaaag gacacttctg attaagacgg ttgaaactag agatggacag gttatcaacg 420
aaacttctca gcatcacgat gaccttgaat aaaaattgca cacactcagt gcagcaatat 480
attaccagca agaataaaaa agaaatccat atcttaaaag aaacagctnt caaagtgcct 540
ttctgcagtt ttttcaggag ccgcaagata agatttggga atanggaata aagctctagt 600
ttcttaacaa ccgacactcc tncaaagatt tantaaaaaa aagttnacca acattaatct 660
nattttacaa aaaaaaatct ttggngccta naaatacctt tttaaaaaag gnntttttga 720
aatanctatt naaaactggt tttttttttt ttccaagcaa gtnttccaac ccaacttggg 780
ttctggctta aaaaaaantt ttgggaaaaa aaaaaaaaaa aaa 823

<210> 24
<211> 817
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 431, 488, 572, 670, 679, 691, 693, 697, 731, 734, 748, 764,
772, 805
<223> n = A,T,C or G

<400> 24
cgaggtaccg gagacaggtg cagtccctca cctgtgaagt ggatgccctt aaaggaacca 60
atgagtccct ggaacgccag atgcgtgaaa tggaagagaa ctttgccgtt gaagctgcta 120
actaccaaga cactattggc cgcctgcagg atgagattca taatatgaag gaggaaatgg 180
ctcgtcacct tcgtgaatac caagacctgc tcaatgttaa gatggccctt gacattgaga 240
ttgccaccta caggaagctg ctggaaggcg aggagagcag gatttctctg cctcttccaa 300
acttttcctc cctgaacctg agggaaacta atctggattc actccctctg gttgataccc 360
actcaaaaag gacacttctg attaagacgg ttgaaactag agatggacag gttatcaacg 420
aaacttctca ncatcacgat gaccttgaat aaaaattgca cacactcagt gcagcaatat 480
attaccanca agaataaaaa agaaatccat atcttaaaag aaacagcttt caagtgcctt 540
ttctgcagtt ttttcaagga gccgcaagat angattttgg aataggaata aagcttttag 600
tttttttaac aaacccgaca cttcctacaa ggaatttaga aaaaaaggtt ttaccaacca 660
ttaatcttan gttttacang aaaaaatctt ngngctnaga attctttttt aaaaagggta 720
tttttggaat nctntttaaa aaacctgntt tttttttttt tccngcaagg tnttccaacc 780
caactttggg tttttgcttt caaanaaaaa aaaaaaa 817

<210> 25
<211> 639
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 362, 417, 495, 533, 536, 537, 552, 622, 628
<223> n = A,T,C or G

<400> 25
aggtactgtg gatatttaaa atatcacagt aacaagatca tgcttgttcc tacagtattg 60
cgggccagac acttaagtga aagcagaagt gtttgggtga ctttcctact taaaattttg 120

gtcatatcat ttcaaaacat ttgcatcttg gttggctgca tatgctttcc tattgatccc 180
aaaccaaatc ttagaatcac ttcatttaaa atactgagcg gtattgaata cttcgaagca 240
agaacaaggc aatgtgcagc cctcatttat gagaaaaccc tcaggaaact cccagggtga 300
tgcttggaga agctgtgagt tgagctgaag ctggagaact tcctccagag caaagggctt 360
angaaaggaa aagaagaact cttaagctgg ggtctgctaa catcactcca gtttaanatg 420
gatcttggca gagaagacat tgcctttgtt cctcctggga ttgggaaaag aatgaattta 480
ctcttccggg aaatntttct tttggtcaac cctggtacct tcgggcccgc ttnttnnaaa 540
cctaagtggg antccccccc cgggctggcc aggggaattt ccaattatcc aaagcctttt 600
attcgattac cccgccgaac cntccaangg gggggggcc 639

<210> 26
<211> 652
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 372, 413, 420, 429, 438, 445, 447, 454, 458, 459, 466, 469,
470, 475, 490, 492, 493, 509, 514, 515, 517, 518, 520, 522,
545, 546, 549, 562, 570, 571, 572, 574, 575, 578, 579, 580,
583, 586, 587, 588, 590, 595, 596, 597, 598, 599, 642
<223> n = A,T,C or G

<400> 26
aggtacaggc tgacagagaa gattcccgag agtaaatcat ctttccaatc cagaggaaca 60
agcatgtctc tctgccaaga tccatctaaa ctggagtgat gttagcagac ccagcttaga 120
gttcttcttt ctttcttaag ccctttgctc tggaggaagt tctccagctt cagctcaact 180
cacagcttct ccaagcatca ccctgggagt ttcctgaggg ttttctcata aatgagggct 240
gcacattgcc tgttctgctt cgaagtattc aataccgctc agtattttaa atgaagtgat 300
tctaagattt ggtttgggat caatagggaa agcatatgca gccaaccaag atgcaaatgt 360
tttgaaatga tntgaccaaa attttaagtg gggaaaagtc cccccaaacc ttngtgtttn 420
aaaataaana gggggggngg ccccnanttt ttgnaaanna accaancann gattntttgg 480
gggggggtn anntataaaa aaaaaaaanc cccnngnncn cnggggttaa aaaaaaaaaa 540
aaaanntanc cccccccccc cncggggggn nngnnaannn aanttnnnan ttttnnnnnc 600
cccccccccc ccccgggggg gggggggggg ggggcccccc cncttttttt tt 652

<210> 27
<211> 605
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 365, 407, 417, 423, 425, 426, 429, 439, 440, 443, 445, 453,
455, 461, 466, 473, 475, 476, 484, 485, 490, 491, 504, 505,
515, 517, 518, 522, 525, 529, 537, 538, 540, 542, 545, 548,
550, 551, 552, 557, 558, 559, 560, 586
<223> n = A,T,C or G

<400> 27
ccgggcaggt acacctgttg tcattcaaca agaaaccact ggcaccccac gctcagatac 60
agtgccctct cccagggacc tgcagtttgt ggaagtgaca gacgtgaagg tcaccatcat 120
gtggacaccg cctgagagtg cagtgaccgg ctaccgtgtg gatgtgatcc ccgtcaacct 180
gcctggcgag cacgggcaga ggctgcccat cagcaggaac acctttgcag aagtcaccgg 240
gctgtcccct ggggtcacct attacttcaa agtctttgca gtgagccatg ggagggagag 300
caagcctctt gactgctcaa cagacaacca aactggatgc tcccactaac ctccagtttg 360
gtcantgaaa ctgattctac tgccctgggg ggagaaggga cttcccntgg ggccaanaat 420
aanannatnc cgattggann ggngntcttt acnanaagag ncccanccccc aancnntccc 480
tggnncaaan naaaaaaaaa taannccccc ccccngnngg cntgnaaang aaatttnnan 540

tnttnaancn nnaaccnnnn cccggggggg gggggggggg gggggncccc tttttttttt 600
ttttt 605

<210> 28
<211> 624
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 326, 372, 398, 400, 401, 410, 411, 415, 428, 435, 436, 449,
450, 453, 454, 457, 474, 475, 476, 478, 489, 491, 494, 506,
512, 514, 516, 517, 518, 519, 523, 526, 534, 562, 570, 573,
574, 575, 576, 577, 581, 582, 583, 589, 590, 591, 593
<223> n = A,T,C or G

<221> misc_feature
<222> 596, 597, 598, 599, 600, 602, 603, 604, 605, 606, 608, 609,
611, 612
<223> n = A,T,C or G

<400> 28
aggtacaggc tgacagagaa gattccccgag agtaaatcat ctttccaatc cagaggaaca 60
agcatgtctc tctgccaaga tccatctaaa ctggagtgat gttagcagac ccagcttaga 120
gttcttcttt ctttcttaag ccctttgctc tggaggaagt tctccagctt cagctcaact 180
cacagcttct ccaagcatca ccctgggagt ttcctgaggg ttttctcata aatgagggct 240
gcacattgcc tgttctgctt cgaagtattc aataccgctc agtattttaa atgaagtgat 300
tctaagattt ggtttgggat caatangaaa gcatatgcag cccaaccaag atgcaaatgt 360
tttgaaatga tntgaccaaa tttttaagta gggaaagntn nccccaaacn nttgnggttt 420
ttcaattnaa gtggnngggc cccgccctnn tgnnaanaaa aaaaaaacaa aaannntngg 480
gggggggna natnattaaa aaaaanaaaa cnancnnnnc ccnggncccc taanaaaaaa 540
aaaaaaaaaa cccccccccc cnggggggggn ggnnnnnaat nnnattttnn ntnttnnnnn 600
cnnnnngnng nngggggggg gggg 624

<210> 29
<211> 311
<212> DNA
<213> Homo sapiens

<400> 29
aggtacttgg aaatgtgaga tggctgtggt gcattccact ggatggggtg ggagttgggc 60
tgactcggag tctcagtgat aaatacttcg acaggaccac ttgagcttgg ataggtctgt 120
aaaggttggc aatgccactc cccaatgcca cggccatagc agtagcaccg gtatctgaca 180
ccatgcacat acttctccca tgaatctcca atttgataaa acgtcccagt ctctgaatcc 240
tggcattggt cgacgggatc acacttccac ctgccccgac cctgaccgaa gcatgtacct 300
cggccgctct a 311

<210> 30
<211> 276
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 94, 121, 146, 165, 167, 174, 196, 204, 216, 217, 237,
270
<223> n = A,T,C or G

<400> 30

cctgtgtgaa aattgtttat cccgctcaca atttccacaa caanattacg agcccgggga 60
agccataaaa gttgtaaaag ccctgggggt gccntaaatt gaagtggagc taacctcaca 120
nttaaatttg cggtttgcgg cttcancttg gcccgctttt tccangncgg gggnaaaacc 180
ttgtccggtg ccccancctg caanttaatt gaaatnnggc ccaaacgccc cgggggnaga 240
ggcgggtttg gggtattggg gggggttttn tcggtt 276

<210> 31
<211> 412
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 60, 61, 62, 64, 65, 66, 67, 68, 72, 77, 78, 82, 83, 84, 85, 87, 90, 93, 95, 96, 98, 102, 103, 106, 107, 112, 113, 115, 120, 127, 129, 130, 131, 132, 133, 134, 137, 139, 141, 143, 145, 151, 152, 153, 159, 160, 161, 163, 166, 167, 169
<223> n = A,T,C or G

<221> misc_feature
<222> 171, 172, 178, 181, 185, 187, 192, 205, 207, 209, 214, 219, 220, 224, 230, 231, 233, 244, 246, 250, 256, 260, 264, 265, 268, 271, 275, 276, 279, 282, 285, 292, 295, 299, 303, 306, 318, 321, 324, 325, 327, 330, 332, 334, 335, 338, 359
<223> n = A,T,C or G

<221> misc_feature
<222> 361, 370, 372, 373, 379
<223> n = A,T,C or G

<400> 31
attggagctc cccgcggtgg cggccgaggt caagcttttt tttttttttt tttttttttn 60
nngnnnnntt tntgcannct tnnnnanccn ccncnncnaa annggnnggg gnncnttttn 120
aaaaatngnn nnnncangna ngnanaaagg nnntttgcnn ngnttnnana nngcgatnaa 180
natangnccc cncatcatta agccntntna gaanggggnn catnaaaagn nangggggat 240
tttntntggn gggccncccn aaannaantt naagnnggng anttnaaaaa anttntgana 300
canccnggag actggacntt nttnnanccn gncnntgntg cttttaaggg atttactanc 360
naagaaaaan anncccctgnt tcgggacaaa aaaatgctct ttttaacatt ca 412

<210> 32
<211> 220
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 18, 25, 28, 39, 60, 65, 85, 104, 113, 119, 122, 128, 135, 145, 148, 161, 165, 175
<223> n = A,T,C or G

<400> 32
natggaatcc tgttggcnca tgatnaanta acccttacng ttcagggttc ctggaacttn 60
taccngggcc actctgacgg gcctnaccac aggtgccccc tacnacatca tangtggang 120
cnctgaanag accanctgaa ggcantantg gttcgggaac naggngtgtt accgntgggc 180
aactctggct tgaaccaacc tacggatgac tcgggctttg 220

<210> 33
<211> 703
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 272, 286, 335, 360, 370, 411, 414, 436, 440, 446, 447,
457, 468, 471, 475, 532, 539, 548, 554, 585, 594, 629, 633,
636, 640, 667, 670, 676, 677, 682, 688, 691, 692
<223> n = A,T,C or G

<400> 33
gaatnggagc tccacgcgcg gtggcgggcc gaggtacaca gtcagtgtgg tttgccttgc 60
acgatgatat ggagagccag cccctgattg gaacccagtc cacagctatt cctgcaccaa 120
ctgacctgaa gttcactcag gtcacaccca caagcctgag cgcccagtgg acaccaccca 180
atgttcagct cactggatat cgagtgcggg tgaccccaa ggagaagacc ggaccaatga 240
aagaaatcaa ccttgctcct gacagctcat cncgtggttg tatcangact tatggtgggc 300
caccaaatat gaagtgagtg tctatgctct taaanggcac tttgacaagc agaccagctn 360
aaggtggtgn caacactctg gagaaatgta agccacccaa gaaaggcttg ngtnacagat 420
gctcttgaga accacnatcn ccattnnctt ggagaancaa ggactggnac nattnattgg 480
ctttccaagg tggttcccgt tccaggccat gggcccgact tccaattccg gngaacccnt 540
ttaggccnga atgntgggaa gcttcaccat tacagggttt accanccagg cctntgactt 600
acaagattta cctgtacctt gggccggtnt tanaanttgn gggatccccc gggcctgcag 660
ggaattnttn tcaagnnttt tngttacngt nnacctttaa ggg 703

<210> 34
<211> 660
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 576, 641, 647
<223> n = A,T,C or G

<400> 34
tcgactacta taggggcgaa ttggagctcc ccgcggtggc ggccgaggta catttgttta 60
tttaaagcac aggaaatgaa taaaatgcca cctaaaaagt atctgcaatg aataaattat 120
ttccagtgaa gcactgcaga tccacacaca ccagtctgct aacctttacc aaggccatgt 180
ccggtgggct tgtgcttgtc ccagttgact cttccttgag acctttccct tctgtgcaat 240
gaccacagca ttagagacca gtcctgcatg cgctggcctt cctcgtaggc atggcagacc 300
acgtggatga gcagtgggct ggcatgcagt aggcttcaac aaatggcact tcactgtttc 360
cagtgaccct gaaatgtttt atgtaagtgg ggcctgggct ttaaagaaaa gagccagggt 420
tcctcaggct gggccccttc actgaggcac agctccagga aatactggtc tcaggagcca 480
gcaacttgtc caggagtttt gagccctcag ttgaaggaaa atggccacgt gggtgtcctt 540
gcaggcaaca gtgatgtcgg tgatggtgac aagtanccag cctaaggaag gccaatccca 600
ccttgggtgg gaatgcaagg gcacctagtc ctgcttggaa ngggctngga aggttgggga 660

<210> 35
<211> 311
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 40, 41, 87, 100, 102, 119, 128, 139, 141, 154, 157, 180,
184, 186, 236, 256, 260, 265, 271, 272, 275, 279, 299, 310
<223> n = A,T,C or G

<400> 35

cggccgaggt acggagcaat cgangaggca taaccacacn nggggtggct atagggctgg 60
aaaacgctga agatgactgc tgacacngag gccaaggatn gnaatacagc cagcttggna 120
aagacatnaa agcaggagnc nctacaagcg agcngcngca ctaagaaaca cccaacaccn 180
ccangngcct ggacaggagg cccccagcag aaacatgcac gcataagctt caagcncact 240
ccctaggatg gatganagan gggcncccaa nnaanggang cccaccagga cccaccagnc 300
agggccccan g 311

<210> 36
<211> 396
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 38, 42, 69, 73, 76, 79, 85, 94, 104, 126, 129, 133, 140, 144, 146, 148, 149, 152, 156, 158, 188, 192, 197, 198, 206, 208, 219, 251, 253, 258, 272, 274, 282, 284, 286, 296, 333, 334, 335, 338, 354, 358, 370, 371
<223> n = A,T,C or G

<400> 36
tccccgcggt ggcggccgag gaccctgttt tancggacnac ancaaaccca cacgagcatg 60
cgcgctccna canganagng ggccnaacac taanctgaaa gcanaagtgc gcgggccgac 120
tgaccnacnc aanaagaagn tcanananna cnacancntt ggcatcatgg tgggcggcaa 180
aggctttnct anccganncc aaaccngntg tgaaaaacnc ttcatgacaa aagacgtgag 240
ccggggtcga nancctgnaa gcacaacagg cnanagagcg ancncncatg tatganagaa 300
ccctcgagga cactcccagg ggagatgcgc cgnnnaanct gggagcagag cagnagcngg 360
caaacgcccn ncagagcaaa gggcttaaga aagaaa 396

<210> 37
<211> 164
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 17, 26, 37, 106, 124, 134, 136, 147
<223> n = A,T,C or G

<400> 37
ggcctctaaa ntgctgntgg tcattnggct gagtcanaaa gccacaaatg tctgctgctg 60
tgatatatag cttgtcagct ttacaaagcg ggcctacgcc attctnatca agaagaatgg 120
ttgncacagt attngngaac tgcaccncag gtggagtgct aaca 164

<210> 38
<211> 78
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 64
<223> n = A,T,C or G

<400> 38
cacaccatct ttgtctagaa taccccttggg ggtgggatct agcacctggg atttgctgct 60
gagnttatct ttgggagg 78

<210> 39

<211> 578
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 29, 38, 39, 43, 45, 49, 56, 58, 70, 74, 78, 80, 82, 84, 87, 109, 133, 145, 147, 153, 156, 171, 172, 173, 174, 175, 176, 190, 208, 211, 225, 229, 241, 253, 261, 264, 320, 333, 337, 344, 360, 378, 379, 381, 383, 386, 398, 399, 400
<223> n = A,T,C or G

<221> misc_feature
<222> 406, 414, 426, 428, 432, 433, 435, 452, 461, 464, 467, 468, 474, 482, 494, 495, 507, 510, 523, 549, 552, 565, 571
<223> n = A,T,C or G

<400> 39
cgcggtggcg gccgaggtac tatganccna acaccaanng ctncnctgna ttgtgngntg 60
gaggttgagn tggnaacnan ancnaantcg gatcacataa agaatgtana aaaggtttgc 120
cgctcctgtg ctngccaaac ccggngntat tantgngatg ggaacctaaa nnnnnntggt 180
caacatcatn tacctttga acaataanga ntcccacatc gtcancttnt ctatggtgaa 240
nctccgggtg tanattccct ngcnctgtat gatttcatgc ttgggattta cactcagaac 300
ttcgggaggg aacatcctgn tgtatgacct atncctntgg ggcnaatgtg tgtgtggacn 360
ctctctctct gactccannc ntnttntgga caattctnnn aatgangggg taanacttaa 420
ccactncngg tnntnatcta aacatttcta tntaaccaaa ntcnctnntg gagntttgtg 480
cnatgcctgt tgcnngctat atgtaanagn ctagaataat aantgcaaaa tggatatggc 540
taactaaana tnctttcaag gttgngtttc nttttttt 578

<210> 40
<211> 619
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 16, 17, 25, 27, 28, 30, 34, 35, 36, 38, 39, 42, 44, 45, 46, 56, 61, 62, 63, 65, 66, 68, 70, 72, 75, 76, 77, 82, 83, 84, 86, 88, 90, 98, 117, 119, 133, 145, 211, 213, 215, 216, 230, 287, 291, 292, 294, 297, 298, 299, 307, 308, 315
<223> n = A,T,C or G

<221> misc_feature
<222> 316, 317, 327, 331, 334, 336, 339, 347, 349, 352, 353, 355, 367, 372, 384, 393, 401, 402, 411, 419, 421, 424, 432, 444, 451, 453, 456, 458, 459, 464, 474, 475, 476, 486, 490, 499, 500, 505, 514, 517, 518, 520, 532, 535, 551, 558, 562
<223> n = A,T,C or G

<221> misc_feature
<222> 564, 593, 601, 602, 613
<223> n = A,T,C or G

<400> 40
aggtacaagc tgncanntaa tattncnnan agtnnntnnt gntnnnaaat cagcangaac 60
nnncnngntn cnatnnnaat annnancnan actgaagnga agtaaagcat cacccancnc 120
actagtccat ctntatttct taccncctta actctaagag gaacttttc agcgggtatc 180
tcaccatcac ggagttgaat ccacattacc ntncnnagag gtcctgaggn ggaaatcata 240
ggaaaaggct gaacattgcc tgttctgctt ctaacaatca caatacngtt nngnggnnnt 300

aaaaganngc gaggnnnata tttagcnttg ngcncnatnt gaaatcnant anngngcaac 360
aaccatnccc cncgtttttt aatngaaatg acnacctgct nngcgggccc naaaagtgnc 420
ncgnaacatt tngcggtttt ccancgaaaa nanttngnnc cccnctttc cccnnnggaa 480
gcgccntaan gaggggccnn ggggnggttt tttnaannan agggcccccc cnctnccggg 540
gggggggtga naaaaaanaa anantaaacc cccccccccc cccggggggg ggnttttaat 600
nnaaaaaaaa acnccccccc 619

<210> 41
<211> 63
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23, 33
<223> n = A,T,C or G

<400> 41
ctccaccgcg gtggccggcc gangtacact ccntggccat accctggaat tcttccctta 60
aca 63

<210> 42
<211> 46
<212> DNA
<213> Homo sapiens

<400> 42
gctccccgcg gtggcggccg aggtacaagc tgtttttttt tttttt 46

<210> 43
<211> 100
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 51, 65, 74, 89, 91, 92
<223> n = A,T,C or G

<400> 43
ncttagggcg aattggagct ccccgcggtg gcggccgagg taccacatct naaatgctct 60
ccagngttct gagnctatta tgggaggan nncctttgag 100

<210> 44
<211> 80
<212> DNA
<213> Homo sapiens

<400> 44
agctccaccg cggtggcggc cgaggtacaa gctttttttt tttttttttt ttttttttgt 60
tttttttttt tttttttttt 80

<210> 45
<211> 21
<212> DNA
<213> Homo sapiens

<400> 45
ggcggccgcc cgggcaggtc a 21

<210> 46
<211> 29
<212> DNA
<213> Homo sapiens

<400> 46
ctccaccgcg gtggcggccg aggtacaag 29

<210> 47
<211> 26
<212> DNA
<213> Homo sapiens

<400> 47
ggcgaattgg agctccccgc ggtggc 26

<210> 48
<211> 75
<212> DNA
<213> Homo sapiens

<400> 48
ccgggcaggt acaagctttt tttttttttt tttttttctt tttttttctt tttttttttt 60
tttttttttt ttttt 75

<210> 49
<211> 498
<212> DNA
<213> Homo sapiens

<400> 49
gattggagct ccccgcggtg gcggccgagg tacttaagtg actaccagga ttggtcttag 60
gcacttagga aaatgtagag tctgttatat agctaataaa tgtaggatct gttaaatatc 120
tgacacagct gatataactt gtgcttatac acatctgtta gaatgaattg gaacatcttg 180
ctgttcaggt tgtaagctac acaaatcacc cgttgcctag attcagtttc catgcgcctt 240
aaaacttgaa tatttaggta tttgtttata aaaatacaac ttattataac tcagagtgta 300
aggatacatg agccaactgt gcaatggttg ttaacaatct aggatggtgc aaggaaaaaa 360
attaacagcc aaatataaga aaagagattt ggggctgttg gattcagcaa ggaatgagca 420
tggcttgatt cagtaaaaga tcatttttct aaagattagt gcctcattca atatgtctct 480
tctcaatctc ctgcctct 498

<210> 50
<211> 208
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 18, 46, 51, 58, 66, 68, 78, 79, 110, 132, 138, 157, 165,
166, 189
<223> n = A,T,C or G

<400> 50
gcgacacggg acaacacnga gtttttacgc ccgggggaga cgctcnacac ncacaccnaa 60
gacgcncngt gttgtatnna gggtgtgcag cgggccacag ggcaccttgn tgtagaacag 120
gcccaacaga cncgcctngg ggagagttgt gcctacngga agagnnggca tagaggcaca 180
ttgtggggnc gtttgcccgt ctggcaca 208

<210> 51
<211> 679
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 35, 41, 49, 52, 61, 84, 99, 119, 122, 127, 186, 232, 295, 360, 421, 447, 454, 466, 478, 493, 508, 566, 591, 604, 616, 624, 636, 652, 655, 660, 664, 679
<223> n = A,T,C or G

<400> 51
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ngggtgggg ccgggcccgg aaagggtacc ttggnagcca ngggattanc gntggggcca 60
ncgaacccca ttcattccag gttnggggt taaaaaacnt aaaccttggt cttcaacgna 120
cnggtcntaa aaccccaagc ttcaacggtt tccccttaat taagttgggg gtgggaaaac 180
aaattnccaa ccgcctttgg gtggaaaatt cttgctttca ccaaaatggg antaggggaa 240
aagaagcccc gaccattcgg aaagggaatc aaaaaaaaag ccggaacgtt cggcnttatt 300
ggaaaccgcc tttggggccc cggcccacca aaggcccaag ttttattccc ttgttggggn 360
taaaactttt tttcttggaa caaccctttt cttggctttt aaaaaaaccc cccaaaaaaa 420
nggggtccaa gaaaaagggg aatccgnttg gaanggggccc cccgcntttt ttcaaccngg 480
gtccttgggt tanttttcgg ttaccccntt cgggggcccg ggttttcttt aaaaaaacct 540
aaagttgggg gaattccccc cccccngggg gcctttggcc aaggggaaaa nttttcccaa 600
attntttcca aaaagncctt ttanttccgg aattancccc ggttcggaaa anccnttctn 660
aaanggggggg ggggggggn 679
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<210> 52
<211> 902
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 39, 75, 88, 116, 149, 152, 196, 225, 252, 294, 306, 329, 350, 365, 386, 404, 414, 423, 434, 452, 465, 582, 586, 610, 620, 634, 692, 700, 704, 714, 723, 728, 737, 754, 769, 788, 796, 810, 822, 823, 825, 827, 838, 841, 846, 880
<223> n = A,T,C or G

<221> misc_feature
<222> 884, 888
<223> n = A,T,C or G

<400> 52
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ggaacctccc ncccgcgggg ggggcgggcc gaagggttnc ccagcccccc acccagccag 60
cccccctttgg accangcctt taaaattngg gggattgaag tggttaaggg gccttntccc 120
tttaagccat taaaggggga aaaggaacng gnttatttaa agccttggaa gaaaagaaat 180
ttggaaaagg aaaagnaaat tggggaggcc cccccaaaag gaagnaaatt aggccattaa 240
aatttaacca anggaaaggg ggaaaaacca ttggaaaagg aaaaccaaag gccncctttt 300
aaaagnaata ttttaaacct ttttcaagnc ccttttcttc ccatttttcn tttggaatgg 360
tcttnaaatg gaagggccaa aaaaantaaa ccttgggggc caangggac cccnccccaa 420
agnaattgga aaanaaaaag ttttaaaatt tnaaaaatgg gtccnccaaa ttgggaaaaa 480
ttttggaagg ttggcccaat ttaaattacc aaaccttggt ttggaccttg ggaccttttt 540
tccccaaaaa aaccccccccg ggttgggaat ccgggtttaa gnaagntatt tcaattccaa 600
atgggtttan cccccgggan gggggaattt tttnggtttt tcctgggccc ttcaattttt 660
atttaaacct tccacctttt cccattggtt anttttttttn gggncccagg tttnttaggt 720
tancccccntt tgggggnccc ggcttttttt taanaaaacc tttagggtng ggggaattcc 780
cccccccngg gggccntttg ccaaggggggn aaaattttcc cnnantnttt tcaaaggncc 840
nttttntttc gggattttac cccccggttc cggaaacccn ttcnaaangg gggggggggg 900
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gg 902

<210> 53
<211> 759
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 15, 28, 31, 55, 84, 224, 325, 353, 368, 395, 415, 432,
442, 465, 484, 490, 498, 532, 553, 554, 569, 575, 607, 640,
663, 698, 702, 752
<223> n = A,T,C or G

<400> 53
aaaaaanttt ttaanccaaa gcctttantt ntaggccagg gggactttaa ccccnttttt 60
cccttcttgg cattaaatgg aaanttaaac ttaggaaaaa ttaacttttg gcaaagggga 120
ggaggcccaa aaagctttaa ggaccccccg gaaaaccagg gaccgaagct taccccttaaa 180
ggaaaccagg cttaaaaaag ggaagccacc acccccccgtc ttanttgtta ggccaaaaaa 240
ataagtgggg ggaaaggaat tttattaagg ggttagggaa ggggcggaac caaaaacctt 300
accccggaag ccccttgggt ggaantaagg ccttgggttt ggtccccaaa agnaattagg 360
gaaattcntt taagtttcaa acctttttta aaaantttttt ggcccccacc caagnaaacc 420
cccttctttt antccccccc antaacctta aggttttaat tttantccgg aaaaacccca 480
ttcnggggcn ccttaacntt caattttcca aaccccaaaa ttaaggcccc cnttgggccc 540
cggttacccc ttnngggccc cggcttttnt taagnaaacc ttaaagttgg gggaattccc 600
ccccccnggg ggcctttggc aaaggggaaa attttcccgn aattatttca aaaggccttt 660
tanttccgga attacccccg gttccggaac cccttccnaa angggggggg gggggggcccc 720
ccggggttac ccccccaagc cttttttttgg tnttccccc 759

<210> 54
<211> 829
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 17, 23, 34, 39, 45, 49, 55, 77, 104, 132, 145, 152, 159,
322, 534, 563, 590, 632, 654, 663, 674, 678, 684, 708, 735,
738, 756, 768, 779, 786, 794, 808, 809
<223> n = A,T,C or G

<400> 54
ggtttnaacc cgttttnaaa tgnggactta cttngtttng cctgnaatng ggaancctcc 60
ccccgccggt ggggccnggc ccgaaaggtt actttttttc aagnttaaaa tttaaaataa 120
aaatgggcca antttgggaa gggangggggg ancaagaana aagggaacat tggggggggaa 180
gttgaagaac ccaaaacaaa gggaatcaat ggaatggaag aacccaagaa actttccctt 240
aagaaaggaa gttgggcccc cgtttgtgga agcccttgga aaaaagaatc cccttgtaa 300
gccgacacct tggaagccaa gnaagccttc cctggtggcc cctcttttcc ggtcccttgg 360
gccctcaacc gcctggtcct gggtttgggg ctttttcccc cggaatcccc ggtccgttcc 420
caatccttct ggtttgggtc cccttggttt gggtttggtt tggttttggt ggggtttttt 480
ttggaagaaa tggggggggg gtttttccgg cttcttttgg ttttggcccc caangggttt 540
ccttggccaa aaaaaaaccg ttngccttgg aagaaaattt tccttaagtn ggggaagggc 600
cacccccttaa aaagttccaa gttggaaagg tnggggaatt aaaccttggg gttnacccct 660
ttnggggccc cgcnttcntt aaanaaaacc ttaaaggtgg gggaattncc cccccccggg 720
gggcctttgg ccaanggnaa atttttccga aattanttcc aaaagccntt taattccgna 780
aataanccccc ggtnccgaaa ccccttcnna aagggggggg gggggggc 829

<210> 55
<211> 597

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 45, 77, 93, 124, 139, 343, 361, 418, 421, 446, 450, 455, 468, 505, 524, 528, 546, 554, 565
<223> n = A,T,C or G

<400> 55
catttttcca aaaacccatn ttcacctttc aagtttttcc cattngggtt aaaccaattt 60
ggcgggggc ctttccnttg ggcttaccca atnaaagttc ggccaattaa gtttggaact 120
ggtngggaaa ttttcttcna aatccttctt ttaacattct ttggaagcct tggggtcctg 180
gtttttttatt accacccaaa aaccaaaaac taaaaatcat tccttgttta cttttaaaac 240
caaccaccaa aagtttcccc attccaagaa aatggccctt attattttgg aagaaaaccc 300
accaaccggt tggccctttc attaaggggg gttccaagcc ggnaaggggt taaaaaagcc 360
nttctttccg ggccaagccg cccgggcttt ggaaaacttt cccttcccca aggggtcntt 420
nggggtaacc cttcgggggc ccggcnttcn ttaanaaaac ctaaggtngg ggaattcccc 480
cccccggggg ccttgggcaa agggnaaaat ttttccggaa ttanttcnaa aaggcctttt 540
aattcngaaa ttancccggg tccgnaaacc cttccggaaa gggggggggg gggggc 597

<210> 56
<211> 747
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 20, 28, 53, 187, 366, 375, 381, 450, 504, 520, 569, 584, 602, 621, 647, 667, 675, 689, 693, 729
<223> n = A,T,C or G

<400> 56
ggtttttngg ggtaaaaaan aagggccngg gggggtaaaa gaatttgccc gangtttccc 60
tttttacctt ttttttttaa accctttttcc cttaattgaa gccaatgccc tggtggttgg 120
ggggttttgg accaagtgga aggggtaaat aaattggacc ttgggtttgg gtttgaattg 180
ggtaagnaat attttggggg cctggtttaa aatttggtca agtttccaag ttggtttttt 240
aaaatccttg gaccgccaag ggcctttaat ttgccgggaa gggaagaaaa tgggtttttt 300
ccaattggtt taacctttaa ttaccttaaa ccattttaag gtttcttttc ttaattaagg 360
ggggtnggaa taagnaattt nggggttccc caaattttgg ggggttggtt ggaaagggga 420
agtttccaag ttttaattaa ttggttttn gggggggaat tttttttttt aaggggttaa 480
ggttgggggg ttggttttgg aagncctttt ggaaaaccgn ccttttttcct tttaaaataa 540
cccctttcgg ggccccggcc ttccttaana aaaaccttaa ggtnggggaa ttcccccccc 600
cngggggcct tggccaaggg naaaattttc cgaattattc caaaagncct tttaattcgg 660
gaattanccc cggtnccgaa cccccttccna aangggggggg ggggggcccc cccgggtaac 720
cccccaaanc cttttttttgg gtttccc 747

<210> 57
<211> 491
<212> DNA
<213> Homo sapiens

<400> 57
aggaaaatgt aaagtctgtt atatagctaa taaatgtagg atctgttaaa tatctgacac 60
agctgatata acttgtgctt atacacatct gttagaatga attggaacat cttgctgttc 120
aggttgtaag ctacacaaat cacccgttgc ctagattcag tttccatgcg ccttaaaact 180
tgaatattta ggtatttgtt tataaaaata caacttatta taactcagag tgtaaggata 240
catgagccaa ctgtgcaatg gttgttaaca atctaggatg gtgcaaggaa aaaaattaac 300
agccaaatat aagaaaagag atttggggct gttggattca gcaaggaatg agcatggctt 360

gattcagtaa aagatcattt ttctaaagat tagtgcctca ttcaatatgt ctcttctcaa 420
tctcctgcct ctttttttaa atgcctcttt ctacacatat atttgcacat aatcttagaa 480
tatgattctg t 491

<210> 58
<211> 700
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 21, 63, 97, 112, 136, 183, 221, 275, 310, 333, 408, 448,
456, 478, 531, 543, 628, 633, 679
<223> n = A,T,C or G

<400> 58
ccntttcttt ggggattccc naaaaaaaaa aaaaaaaatc cagcaagcca caaaatggcg 60
aanggggggtt tctttggaat attaaagccg ccccgcnatt accgtgggaa tngggggttc 120
aacaatccct tggttnaaat caatggaact tcccacggcc aaaggaacaa caagggaagt 180
tcnttccaaa ttgggaatgg ccccttccca aggggtattc nttttttcca acttcctttg 240
gccaaggaat tttttttttt taatggtcca aaatncttct ttttcccgga acccaatttc 300
cttcccttcn aaaaaccttg ggtaacccct tcnggggccc cggctttcct taagaaaacc 360
cttaaggttg ggggaattccc cccccccggg gggccttggc caaggggnaa aatttttccg 420
gaattaattt ccaaaaagcc cttttaantt ccgggnaatt taacccccgg ttcccggnaa 480
ccccccttccc ggaaaggggg gggggggggg ggggcccccc ccgggggtta nccccccccaa 540
agnccttttt ttttttgggg tttttccccc cctttttttt aaaggttggg gaaggggggg 600
gggtttttaa aaaaattttt gggcccgncc cgnccctttt tgggggccgg gtttaaaaaa 660
tttcaaattt ggggggttnc caatttaaag ggcctttggg 700

<210> 59
<211> 337
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 196
<223> n = A,T,C or G

<400> 59
gccgaaattg gancctccac ccgcggtggg cggcccgaag gtaccagccg gcttcatggg 60
aacatcaaag ttccccggct tgggaagcca aggaagaatt ggcccacctt acccgcagcc 120
tggcttccga ggggacaagg gaaagaatca ccttaccaac caaatttgtt ctggcctccc 180
aagggtcctt cttganggca agcaaggctt ctgggggcct ttctgcttgt cctttgggag 240
gggtggttct ttcttggggt aagaagggat ggggaaaggg aaaggggacc ctttaccccc 300
ccgggctctt ctccttgacc ctacccaatt aaaaaaa 337

<210> 60
<211> 394
<212> DNA
<213> Homo sapiens

<400> 60
aggtacagaa tcatattcta agattatgtg caaatatatg tgtagaaaga ggcatttaaa 60
aaaagaggca ggagattgag aagagacata ttgaatgagg cactaatctt tagaaaaatg 120
atcttttact gaatcaagcc atgctcattc cttgctgaat ccaacagccc caaatctctt 180
ttcttatatt tggctgttaa tttttttcct tgcaccatcc tagattgtta acaaccattg 240
cacagttggc tcatgtatcc ttacactctg agttataata agttgtattt ttataaacaa 300
atacctaaat attcaagttt taaggcgcat ggaaactgaa tctaggcaac gggtgatttg 360

tgtagcttac aacctgaaca gcaagatgtt ccaa 394

<210> 61
<211> 466
<212> DNA
<213> Homo sapiens

<400> 61
agggcgaatt ggagctcccc gcggtggcgg ccgaggtact ccacgaggaa actacaattc 60
caggaacaga tttgaaactc tcctacttga gttccagagc tgcagggtat aagtcagttc 120
tcaagatcac catgacccag tctattattc catttaattt aatgaaggtt catcttatgg 180
tagctgtagt aggaagactc ttccaaaagt ggtttcctgc ctcaccaaac ttggcctata 240
ctttcatatg ggataaaaca gatgcatata atcagaaagt ctatggtcta tctgaagctg 300
ttgtgtcagt tggatatgag tatgagtcgt gtttggacct gactctgtgg gaaaagagga 360
ctgccattct gcagggctat gaattggatg ccgtccaaca tgggtggctg gacattagat 420
aaacatcgcg tgctggatgt acctcggccg ctctagaact agtgga 466

<210> 62
<211> 503
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 427, 431
<223> n = A,T,C or G

<400> 62
ggctaattgg agctccccgc ggtggcggcc gaggtatctc cggggtggcg ctggggttgg 60
ctccatgacc aagatctatg gggacgtca gagaaacggc gtcatgccca gccacttcag 120
ccgaggctcc aagagtgtgg cccgccgggt cctccaagcc ctggaggggc tgaaaatggt 180
ggaaaaggac caagatggcg gccgaggtcg gtaattgata atctggcacc ctgcaaggct 240
agaatggcga tcaaacattt tcactggctg agactctcct tccatactcc agtgataaac 300
tgcattatcc gtaacaagaa gcaacccgta ttcaaagaga tccatttcca aaaggtgaca 360
tcatcagtca tggtatgagc cttcatttta cttttcattt caatggttaa aaatctgaag 420
agttttncca nctttcaagt gcaatttact ttgctaagcc tggattcatg atggcgcctg 480
tcttggcttg aaaattgggt ctt 503

<210> 63
<211> 331
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 16, 18, 21, 28, 30, 32, 33, 35, 37, 39, 40, 45, 46, 48,
49, 51, 53, 56, 59, 61, 62, 66, 77, 80, 82, 85, 87, 92,
94, 97, 102, 104, 106, 111, 113, 116, 118, 121, 126, 129,
137, 143, 144, 149, 150, 157, 158, 160, 163, 165, 167, 168
<223> n = A,T,C or G

<221> misc_feature
<222> 172, 177, 179, 185, 186, 187, 189, 193, 203, 215, 218, 223,
228, 234, 240, 241, 243
<223> n = A,T,C or G

<400> 63
aggtacacta cctnanantg nttccacngn cnngncncnn tgctnnanng nanganggnc 60
nntatnctgt gtttatngcn tngangntaa angnganagc cngnantaaa ngnatncntg 120

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nctttnganc tatgaanctc atnncaaann gatctanngn aananccnntg angggggngnc 180
ctgtnnncnt gtncacctac ctntatggaa aggtntgntg gtntcttnaa ttanacatgn 240
nantagatgc ctgctggata atatataaac aataaaaaca actttcactt cttcctattg 300
taatcgtgtg ccatggatct gatctgtacc t                                331

<210> 64
<211> 402
<212> DNA
<213> Homo sapiens

<400> 64
cgaggtcgca gcagctgggg aggagccaaa gcctcggcgc tcacctaagc cgcagggaga 60
tacacccaac tgggagatga ggaaacagca acccagagag gagaactaac ccacacagga 120
tcatttcgtg aaggagcaag gctgaagaac cagacctgga ctttcttagg acaaacttac 180
tgcagcttga aggagccaac catggatttg aggcgtgtga aggaatattt ctcctggctc 240
tactatcaat accaaatcat tagctgctgt gctgttttag agccctggga gcgatctatg 300
tttaacacca tcttactaac cattattgct atggtgggta tacactgcct atgtctttat 360
tccaatccac attccctggc ttgggaattt ttctcaaaaa ta                    402

<210> 65
<211> 431
<212> DNA
<213> Homo sapiens

<400> 65
ccgggaggct cccaggcgcc cggcgcagtg ggaagctcgc agcagctggg gaggagccaa 60
agcctcggcg ctcacctaag ccgcagggag atacacccaa ctgggagatg aggaaacagc 120
aacccagaga ggagaactaa cccacacagg atcatttcgt gaaggagcaa ggctgaagaa 180
ccagacctgg actttcttag gacaaactta ctgcagcttg aaggagccaa ccatggattt 240
gaggcgtgtg aaggaatatt tctcctggct ctactatcaa taccaaatca ttagctgctg 300
tgctgtttta gagccctggg agcgatctat gtttaacacc atcttactaa ccattattgc 360
tatggtggta tacactgcct atgtctttat tccaatccac attcgcctgg cttgggaatt 420
tttctcaaaa a                                                      431

<210> 66
<211> 179
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 52, 54, 62, 64, 65, 70, 85, 88, 96, 108, 109, 125, 129,
131, 139, 142, 164, 167, 168, 170
<223> n = A,T,C or G

<400> 66
tagggcgaat tggagctccc cgcggtggcg gccgaggtac tcgaacanca tncngcagct 60
gntnnacaan ttccctcctg accanctnac aagctnacga gcgccgtnnt ggtctgggcc 120
caaangctnt ncacacccnc tnacctttga tgtaaacaat cccntgnntn tggactatg  179

<210> 67
<211> 147
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 30, 42, 46, 63, 71, 73, 87, 93, 96, 100, 138, 143
<223> n = A,T,C or G
```

<400> 67
ccgggcaggt accacgtgna ccaccaccgn tacctgggcg gngacnggct ggacgtggac 60
gtncccacac ntntggaggg ctggttnttc tgnacncccn cccgcaagct gatatggctg 120
gtgctgcagc ccttcttnta ctnacta 147

<210> 68
<211> 128
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 10, 19, 27, 38, 43, 49, 60, 61, 63, 65, 70, 79, 87, 88,
104, 110, 116, 128
<223> n = A,T,C or G

<400> 68
acgtaccnan cttttgttnc cttaagngag ggttaatngc gcncttggng taatcatggn 60
nananctgtn tactggaant catgacnntg tctgggctgc aaanaagcan tgcccntgtg 120
atcatttn 128

<210> 69
<211> 671
<212> DNA
<213> Homo sapiens

<400> 69
gcgaattgga gctccacccg cggtggcggc cgcccgtgga gggtcaatca tggagatgag 60
cccaacaaag cacagattat cgatagggaa attcacatcg tcagtgtcaa actggaaccc 120
ttcaggaaac tgttcatctg gcagaaagag gtggcagaaa cctaggactc gttctccgag 180
gcccccccagc tccaaatagg cgttctgaaa ggcgtctttc agctcctcat ccaggggctg 240
ctccttgccg tggaggagga tagagctgca acggtctagg atcctttctg gggcgccctt 300
catcaccaac aggtgttggg gctccgatgt gttggggttc ttatgaatag acaactggta 360
cctcggccgc ccgggcaggt acttttatct taaaagggtg gtagttttcc ctaaaatact 420
tattatgtaa gggtcattag acaaatgtct tgaagtagac atggaattta tgaatggttc 480
tttatcattt ctcttccccc tttttggcat cctggcttgc ctccagtttt aggtccttta 540
gtttgcttct gtaagcaacg ggaacacctg ctgagggggc tctttccctc atgtatactt 600
caagtaagat caagaatctt ttgtgaaatt atagaaattt actatgtaaa tgcttgatgg 660
aatttttcc t 671

<210> 70
<211> 268
<212> DNA
<213> Homo sapiens

<400> 70
ggaccttgta gggcacatac ttcctgtaga tatggcccac cctggagcag gggatgtcct 60
ccatgcggcc cccacacatc cacaccttga aggagatttc atactgctcc cctccccaga 120
tctccaagcc tgggtcatac ccgccgagtt cccagaacca cttccgatcc acggcgaaca 180
gtccaccggc catcacggga gactcaaatg ggtcgctggg gtcagctttc tgcagttctg 240
gagggatcgg gatccgcttg tagtacct 268

<210> 71
<211> 906
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 7, 123, 244, 409, 488, 493, 523, 551, 571, 601, 619, 633, 642, 664, 701, 709, 722, 770, 781, 800, 804, 812, 818, 825, 828, 842, 849, 865, 879, 884
<223> n = A,T,C or G

<400> 71
```
tggggcnggg cccgaaaggt accttattgt ggaactttc atttggattg ccccccaggg 60
aacaccaaga agaactttt tccaaaaaaa cattggaatt accagggggg aacattcttc 120
aanggcttgg aactggtggc tggtcctgga attggttggc ttgccttggg tggtttgggg 180
tggaaaattt ggaaaaagcc ttgggttatt cttccaaaga aaattggggg ccaagaaccc 240
ccgnaagaaa gccatgcccc tttcttgggc ctttaacaca actgggggtg gtggaaaaac 300
caaacctaaa tttggtccgg gtggttttaa accaaaaaaa ttggggaatt ttcccacctt 360
ggaaggcccg ccccccttacc aagcccaggg aaaagaaaga aatatttgna aggggaaaaa 420
tttgggttta aaaggggaaa agttccaagg ccaccttttt accaattttt aaaagaaaaa 480
aaaatttngg gcntttaccc aaaacccccc ccggaaccca ccnaagttta agcccaattt 540
ttttggttgg nccccaaaaa ttttttcctt nggggttttg ggggaaaatt ggggggttgg 600
naacccaaaa ccaattggnc cttgggggaa aanccccaaa anggggccaa tttgggtttt 660
aaanaaaacc cctttggccc ccccgggggg ggcccggggg nccccggcnt tttcttttaa 720
anaaaaaccc ttaaagggtt ggggggaaat tccccccccc cccgggggggn ccttttggcc 780
naagggggaa aaaatttttn cccnaaattt antttccnaa aaagnccntt ttaatttccg 840
gnaatttanc cccccggttt ccggnaaacc ccctttccna aaangggggg gggggggggg 900
gccccc                                                            906
```

<210> 72
<211> 437
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 48, 57, 61, 64, 327, 419
<223> n = A,T,C or G

<400> 72
```
agggtggcaa aaaaaaaaag ggccgttttg ccntcaacaa attggtancc cgagaantac 60
nccntcaaca ttcacaagcg cttccatgga gtgggcttca agaaaccgtg cacctcgggc 120
acctcaaaga gattcggaaa tttgccatga aggagatggg aactccagat gtgcgcattg 180
acaccaggct tcaacaaagc ttgtctgggg ccaaaggaaa taagggaatg tgccattacc 240
gaatcccgtg tgccggctgt ccagaaaacg taatgaggga tgaaagattc acccaaataa 300
gctatattac ttttggttac cttatgntac cttcggcccg ctctagaaac ttaggtggga 360
tccccccgggc ctgcagggaa attccgatat tcaaggctta tcgataccgt cgaccttcna 420
ggggggggcc ccggtac                                                437
```

<210> 73
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 5
<223> n = A,T,C or G

<400> 73
```
ggcnnattgg agctccccgc ggtggcggcc gaggtaccat ttgtggtgcc caagtttaag 60
ttatcttaca ttcaacccag gacacaagaa actccttcac atctggaaga acttgaagga 120
tctgccagag catcttttgg agatcgaaag gtagaacttt ccagttcatc ccagcacgaa 180
cctagctatg atgtgtataa cccattctat atgtatcagc acatttcacc tgatttgagt 240
```

cgacgctttc ctccccgttc agaagtgacg agactgtatg gatcggtttg tgatttaagg 300
acgaacaaac ttcccggttc ccctgggcta agcaaatcta tgtttgatct tacaaactca 360
tctcagcgat tcatccagag acatgattca ttgtccagtg tacct 405

<210> 74
<211> 360
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6
<223> n = A,T,C or G

<400> 74
agggcnaatt ggagctcccc gcggtggcgg ccgaggtacc accagaggac acggataatc 60
ttcatatctg attctcctgc ggtgcgtgtg ccctgacaga agaagttgta tttgccttcc 120
catactcctg ttactaactc acagaacata tacagagaca gcagtgtgag tccaaggtta 180
tacaccacta aaatcccccg gcaagagaat ggctgtttat tcctcatgta ttttggtccc 240
agccatacaa ttagtaaata tatgacagag cagataaatg tgggtatata attgtccaga 300
agaaaccatc cttttactct agtatctcga gggcctagca atgccttgaa ataggtacct 360

<210> 75
<211> 391
<212> DNA
<213> Homo sapiens

<400> 75
aggtgtcgcc gccgcgaagg gagccgccgc catgtctgcg catctgcaat ggatggtcgt 60
gcggaactgc tccagcttcc tgatcaagag gaataagcag acctacagca ctgagcccaa 120
taacttgaag gcccgcaatt ccttccgcta caacggactg attcaccgca agactgtggg 180
cgtggagccg gcagccgacg gcaaaggtgt cgtggtggtc attaagcgga gatccggtga 240
gttttgtctg gtttgggcca gagagcggcc cctttcccgg gtctgggaag ctgtgatttt 300
ttactgtcag gcagggaaga gacggtaact gccatcgcgg cgggccatcc ctgggcgcca 360
ggggtgtttg gtctggggtt acctgcccgg g 391

<210> 76
<211> 430
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 17, 22, 23, 28, 29, 35, 36, 37, 40, 41, 43, 46, 53, 57,
68, 69, 70, 71, 80, 84, 87, 90, 91, 99, 100, 104, 109, 112,
113, 116, 119, 121, 123, 125, 126, 130, 136, 141, 143, 144,
197, 198, 216, 217, 219, 225, 226, 227, 231, 253, 255
<223> n = A,T,C or G

<221> misc_feature
<222> 259, 265, 272, 277, 283, 297, 302, 305, 312, 318, 323, 325,
334, 359, 363, 366, 383, 386, 393, 394, 401, 403, 409, 411,
414, 418, 419, 421, 422
<223> n = A,T,C or G

<400> 76
gcggccgagg tactgnnagg gnnaaaanna gctgnnnggn ngncanaagt gcntctnctt 60
aaggaccnnn ncctgctggn atanagnacn naaacctann accntggant gnngantanc 120

```
ntnannggan tacggncaaa ngnnggcctg cggctgctga actaccatta cttcactggt 180
gtcagatggg gagacgnngg cacgtaatgg gcatanncnt ccttnnnggc naatctgcaa 240
gcgtggaagg cancntgtna ctgangcctt cnacttncac ttntaacctt ggagctnact 300
gnttnctgcc tntggggntt ttntnaagaa accnacccac tgtgatcaat attggagana 360
aantgnacat tcttgggctg aanacnggcc tcnnacactg ntnacactng nctntgannc 420
nncagtacct                                                        430
```

<210> 77
<211> 351
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 37, 39, 42, 44, 45, 47, 50, 52, 54, 57, 60, 63, 67, 70, 84, 88, 93, 94, 97, 99, 105, 106, 117, 123, 131, 134, 135, 139, 141, 143, 146, 161, 175, 182
<223> n = A,T,C or G

<400> 77

```
naattggagc tccccgcggt ggcggccgat gtacatntnt cngnnanggn cngntgnagn 60
aanaccntan caatcctatc catnccgntg acnntgngng ggggnncaaa acccaantgc 120
tgntgcctct nccnngccnt nantgnaaca ctcagcgaaa ntcatggttc ataantgaaa 180
cntgaattcc tctagactct gcaatactgc actcttaaca aaaatcaaat gaaaacaaga 240
cgtgtctgcc acaggtctca gggtaacaga tgccctgtcc actgagagcg gcagttctgc 300
agtcagagtt ctttgatcag ccctggaccc atttatcaca tgggggagga a          351
```

<210> 78
<211> 629
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 25, 63, 64, 65, 142, 158, 159, 160, 204, 223, 224, 233, 255, 256, 257, 258, 260, 263, 270, 271, 272, 286, 287, 290, 291, 292, 293, 295, 296, 297, 298, 299, 303, 324, 331, 333, 349, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360
<223> n = A,T,C or G

<221> misc_feature
<222> 361, 362, 363, 364, 365, 366, 367, 369, 370, 371, 372, 373, 374, 375, 376, 377, 380, 384, 386, 389, 390, 391, 393, 406, 408, 409, 417, 419, 421, 424, 429, 434, 438, 439, 451, 453, 456, 474, 475, 484, 486, 489, 492, 493, 501, 505, 516
<223> n = A,T,C or G

<221> misc_feature
<222> 523, 536, 537, 538, 543, 546, 547, 554, 555, 558, 563, 565, 568, 571, 572, 574, 575, 577, 581, 582, 586, 587, 592, 594, 610, 611, 629
<223> n = A,T,C or G

<400> 78

```
actccccgcg gtggcggccg cccgngcagg tacaaagctt tttttttttt tttttttttt 60
ttnnnaattt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 120
tttttttttt tttttttttt tnaaaaaaaa aaaaaaannn tttttttttt tttttttaaa 180
aaaaaaaaaa aaaaaaaccc cccncaaaaa aaaaaaaaaa aanncccccc ccnaaaaaaa 240
aaaaaaaaaa aaaannnncn acnccccccn nngggggggg gggggnnccn nnncnnnnnt 300
```

ttnaaaaaaa aaaaaaaaaa aaanaccccc nanaaaaaaa aaaaaaaana nnnnnnnnnn 360
nnnnnnnann nnnnnnnaan aaananaann nanaaaaaaa aaaaananna aaaaaanana 420
naanaaaana aaanaaanna aaaaaaaaaa nanaanaaaa aaaaaaaaaa aaannaaaaa 480
aaananaana annaaaaaaa naaanaaaaa aaaaanaaaa aanaaaaaaa aaaaannnaa 540
aanaannaaa aaannaanaa aananaanaa nnannanaaa nnaaannaaa ananaaaaaa 600
aaaaaaaaan naaaaaaaaa aaaaaaaan 629

<210> 79
<211> 466
<212> DNA
<213> Homo sapiens

<400> 79
ccgggcaggt actacccaag tgttacaggc tctgcatagg tcctcaaaca ctttaaagga 60
cacgaaccat caaattcaaa agagtagtgt ttgttctatc agttctgaat gtccacaggg 120
agaggcaact agatttatgt ggaaaaagtg ctgtttgaag gagctgtgtt ttatttcgaa 180
gtgaaatgac tttgggaacc agaacatttc tgcagatgtc tgaatatcaa gaacctatct 240
ctaaaaggca tttatcagga aatgttcgct cactccaagt gctttttaaa aattcaacat 300
atggcaatgt tttaattttt gtgctttcaa gaggtaacta aatcgatagg aagctgaggg 360
aagatcattc cattatggac tttcttgttt gggtgcaaga cactatccac agcattgaaa 420
tctataatct cataaaagat tcttataaac atataccata tttctc 466

<210> 80
<211> 468
<212> DNA
<213> Homo sapiens

<400> 80
gattggagct ccccgcggtg gcggccgagg tacttgctgg tctcaaattt ccacaaggag 60
atatcaatgg tgataccacg ttcacgctca gctttcagtt tatccaagac ccaggcatac 120
ttgaaggagc cctttcccat ctcagcagcc tccttctcaa atttttcaat ggttcttttg 180
tcgatgccac cgcatttata gatcagatgg ccagtagtgg tggacttgcc cgaatctacg 240
tgtccaatga cgacaatgtt gatatgagtc ttttcctttc ccattttggc ttttaggggt 300
agttttcacg acacctgtgt tctggcggca cctgcccggg cggccgaggt actacctgaa 360
ggagcttcag ctgcccctga agaaggaatg agtagcgaca gtgacattga atgtgacact 420
gagaatgagg agcaggaaga gcataccagt gtgggcgggt ttcacgac 468

<210> 81
<211> 109
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 35, 40, 43, 58, 109
<223> n = A,T,C or G

<400> 81
attggagctc cccgcggtgg cggccgaggt attanaccgn cgngagacag gttaattnta 60
ccctactgat gatgtgttgt tgccatggta atcctgctca ctacctctn 109

<210> 82
<211> 53
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27, 44, 47, 48

<223> n = A,T,C or G

<400> 82
tgctgtttcc tgaactatac cagtggngga acacttgaac aaantgnnta cct 53

<210> 83
<211> 404
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 36, 43, 45, 49, 50, 55, 73, 75, 76, 79, 82, 94, 96, 100, 102, 110, 111, 112, 113, 117, 119, 124, 128, 129, 131, 132, 133, 135, 136, 143, 145, 151, 179, 214
<223> n = A,T,C or G

<400> 83
gcnaattgga gctccccgcg gtggcggccg atgtanaact agngnatann ccggnctgta 60
tgaatattat atnannctna tncataccat ttancncaan gnggggcccn nnnccancnt 120
tttntttnnt nnncnnaagg aanantgaac nctaaggaat acatcatggt aagattctnt 180
cctactgtgt cagcgagcgc tgctgccggt ctanattgcc atgtcccaac aacagcaaag 240
ccaccctccc tcctgcttct tccaggattg ctctttaaag ggaccagagt gacatactga 300
tgcctactga ggcatctgag atgcactgtg ttggaggtta gcctcaatgc cagcctctgg 360
ttgtctaggt gagtgacatc accataaaat cacattgtgt acct 404

<210> 84
<211> 122
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 96
<223> n = A,T,C or G

<400> 84
ctatagggcg aattggagct ccccgcggtg gcggccgagg tacaagcacg gttggcatgg 60
cctttccaaa ggtcttccac tagagtctag agaaanctaa atatagtcat ccacaaactg 120
ga 122

<210> 85
<211> 403
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 284, 306, 311, 313, 316, 317, 327, 330, 333, 340, 353, 354, 357, 361, 367, 369, 371, 372, 374, 376, 381, 390, 391
<223> n = A,T,C or G

<400> 85
tggagctccc cgcggtggcg gccgaggtac tccatttata taaaattcta gagcaggcaa 60
aactatagtc acagaaagtt gaccactgat tgtttggggc tggcagttgg ggtatgattg 120
accacaaaag ggcctgtagg aacttttagg gtgacagaaa tgttctatat attgaagttg 180
tttttagtta catggatgta gcatttgtca ataatcggct aactggacat ttaaaatggt 240
tccattttct cacatgtaaa ttatacctca aagttgatcc aaanaaaaaa aaaaaaaaaa 300
aaaaangttt ngnccnnccc gggggnccn ttnaaaaaan ggggaccccc ccnnccnggg 360

naatttnant nnancntttt naaaccccgn ncccccgggg ggg 403

<210> 86
<211> 423
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 139, 143, 147, 157, 158, 161, 165, 173, 187, 204, 208, 228, 249, 257, 260, 272, 276, 301, 320, 324, 325, 337, 346, 350, 359, 367, 372, 374, 375, 378, 380, 383
<223> n = A,T,C or G

<400> 86
aggtaccagt tatccactca ctgacttagg tgcctccact agaattctca gcacgttttt 60
gcagaacctg ggcaacaaga gcgaaacccc atctcaaaac cacaacaaca acaacaggac 120
aacagagatt ggacgaccng atngggnaaa agccaannca nacangcgtg aanggccagg 180
taccggnaaa gtaggcacaa gggnagcntc tgctcagtgt cgctacangg gggatctctc 240
aaggacttna caaacgnggn ccacatcctt cntagnggga aagattactt ggttctcatt 300
naatggatcc ctttgttttn gggnncctac accttcnccc caatgnttcn cttttcttnc 360
ttggtantcc cntnnctntn ccnaaacttg ggcccaattt ttaattttta attttttaaa 420
cct 423

<210> 87
<211> 570
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 397, 418, 434, 440, 450, 492, 537
<223> n = A,T,C or G

<400> 87
cgaggtacag tccagtcctt ggagatcgac ctggactcca tgagaaatct tgaaggccag 60
cttggagaac agcctgaggg aggtggaggc ccgctcgccc tacagatgga gcagctcaac 120
gggatcctgc tgcaccttga agttcaaaag ctggcacaga cccgggcaga gggacaagcc 180
gccaggccca ggagtatgag gccctgctga acatcaaggt caagctggag gctgagatcg 240
ccaccttccg cccgccctgc tggaaagatg gcgaggactt taatcttggt gatgcccttg 300
gacaagcaag caactccatt gccaaaccat tccaaaaaga ccacccaccc cgccccggata 360
ggtgggatgg gcaaaagtgg tgtcttgaag aaccaantga ccacccaaag ttcttgangc 420
attaaaccca gcanaagcan gggtaccttn ggccgcttct aaaaactagt gggatccccc 480
cgggcttgcc anggaatttc gatatcaaag ccttatcgaa tacccgtccg accctcnaag 540
gggggggccc ccggtacccc aactttttg 570

<210> 88
<211> 313
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 11, 20, 23, 25, 31, 33, 38, 40, 44, 46, 51, 58, 59, 62, 68, 74, 78, 80, 81, 85, 89, 92, 96, 97, 99, 102, 104, 109, 111, 112, 115, 120, 129, 135, 139, 151, 158, 175, 182, 185, 188, 190, 198, 202, 203, 208, 217, 226, 227, 269, 272
<223> n = A,T,C or G

<221> misc_feature
<222> 276, 280, 289, 293, 296, 298
<223> n = A,T,C or G

<400> 88
acgnactaat nctgactgtn aangngacgc ntnacgancn ttcncncctt ntgggtcnna 60
ancagganga gttngatnan ncatnacana gntaanngnt tngnggcgna nnagnatccn 120
taacaaagnt acttntagna cgtctgatgg nacctctncc tatctttaac aagcngattc 180
cnccnacngn tggattgnta anncactntt atcgganacc tgagcnnttt taggacgggc 240
ccgagacaag cttttgttac cttactgang angtgntggn gccctgggna tantgntnag 300
tacctgcccg ggc 313

<210> 89
<211> 342
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 3, 4, 8, 9, 23, 27, 32, 33, 35, 38, 40, 46, 49, 55, 65,
74, 78, 80, 89, 98, 101, 106, 113, 114, 124, 133, 135, 137,
143, 170, 180, 187, 195, 213, 223, 256, 266, 277, 291, 312,
329, 339
<223> n = A,T,C or G

<400> 89
ncnnggcnng tacacgggaa acnattnatt cnngnctnan ggggganttnc cttancggat 60
actanaccca tacntttnan ggctatganc acagacangt nagatnccat gcnncctggg 120
ccangatctt ccncnantag ttncctgctt aagcaaatag aatttcttan ggggcagatn 180
ccaaaancac cgatnattgg aaagcaaaca ccnacactgc cancttccct cccaggactc 240
ctgccaaggt ttccantacc taacgncgct ctaaaantag tgaatccccc nggctgcaat 300
gaattcgata tnaagcttat caatacccnt catacctang at 342

<210> 90
<211> 335
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 12, 13, 14, 23, 25, 29, 31, 37, 38, 41, 50, 52, 55, 59, 60,
61, 65, 69, 70, 73, 80, 83, 84, 88, 89, 94, 102, 111, 114,
117, 126, 133, 138, 140, 149, 162, 188, 235, 239, 243, 251,
252, 253, 255, 257, 258, 260, 267, 268, 271, 280, 281
<223> n = A,T,C or G

<221> misc_feature
<222> 283, 286, 298, 302, 304, 305, 315, 333
<223> n = A,T,C or G

<400> 90
aggtacatgg annnattggc ttntnaccng ntgctcnncc ngaccattgn tngcnggcnn 60
ntggncatnn acnaagccan aannaaannt ctgncacaaa ancgaaatct nccnatntac 120
attacnaata cgntaaancn caccaaggng tgaaggcgat antgcaggaa ctgcaatgga 180
cccctggntg gaaccctatc atagggacaa ggatggcttc ctgggaactc cgagnggang 240
gangactgct nnntnanncn agcacannca ngatgaagan ntnttnattc tttaagancc 300
tngnnattga acttnacact gatctgtacc tcncc 335

<210> 91

<211> 155
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 31, 32, 37, 48, 65, 77, 78, 79, 80, 85, 90, 95, 98, 99, 105, 106, 122, 144
<223> n = A,T,C or G

<400> 91
gattggagct ccccgcggtg gcggccccgnc nngccangta cataagcnaa tatgcccatt 60
ggggncctgg gcactannnn gtctnttttn ggcanaanna atganctgt gaacgtggcc 120
cntgatgcct aatatcccac aacnactgtg cctat 155

<210> 92
<211> 478
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 18, 21, 22, 30, 31, 38, 40, 56, 61, 63, 66, 76, 81, 87, 88, 90, 91, 95, 96, 100, 101, 102, 106, 107, 108, 110, 111, 114, 115, 116, 117, 120, 121, 122, 124, 125, 126, 128, 131, 133, 135, 136, 139, 143, 146, 148, 154, 156, 158, 163
<223> n = A,T,C or G

<221> misc_feature
<222> 165, 167, 168, 169, 173, 175, 177, 178, 182, 183, 184, 185, 188, 198, 203, 205, 206, 213, 217, 218, 220, 226, 229, 235, 240, 243, 244, 247, 248, 250, 252, 254, 270, 271, 283, 286, 287, 288, 289, 316, 326, 331, 335, 344, 348, 350, 353
<223> n = A,T,C or G

<221> misc_feature
<222> 355, 356, 364, 365, 368, 371, 372, 373, 380, 383, 386, 394, 402, 405, 408, 409, 422, 430, 443, 451, 469
<223> n = A,T,C or G

<400> 92
acgtnccagg ggctgtgnat nnactacctn ncatagancn ccgccctcat tcagcncaaa 60
ntntangact tcttgntcaa nctgagnncn ncatnnatan nnaccnnncn nttnnnngan 120
nnannnantc ncnanntant ganaanantc tttntntnca ccntnannnt tangntnntc 180
annnnctntc aagacaanta cgngnncaat atnaggnntn ctaatnttng gggcncgatn 240
ttnntanntn cnantctggc tatataactn nccacatgac tgntannnna cttcaatcgt 300
tcaagaatta tatgancctа tgaccncaat naatnccatg tacntctnan gcntnncaac 360
tacnngancg nnnggcctgn aanaantcta tatnaacctt anctnaannt taaacctcca 420
cngggggccn tcatcccaat ttntgttcct ntaatgaagg ttaattgcnc ccttggcg 478

<210> 93
<211> 414
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 74, 81, 87, 92, 100, 101, 102, 105, 106, 111, 112, 113, 114, 115, 116, 117, 122, 123, 124, 128, 132, 134, 135, 144,

145, 146, 147, 152, 154, 158, 159, 168, 170, 176, 177, 181,
182, 185, 196, 202, 204, 205, 208, 210, 217, 222, 223
<223> n = A,T,C or G

<221> misc_feature
<222> 224, 230, 231, 232, 233, 240, 243, 244, 245, 247, 248, 251,
252, 253, 254, 256, 257, 258, 261, 262, 263, 268, 270, 272,
279, 280, 286, 287, 288, 293, 300, 305, 306, 308, 309, 328,
339, 347, 348, 359, 365, 372, 378, 388, 389, 402, 406
<223> n = A,T,C or G

<400> 93
agggcnaatt ggagctcccc gcggtggcgg ccgaggtaca agcttttttt tttttttttt 60
tttttttttt tttnaaaaaa ncccccnttt tnaattttn nnccnntttt nnnnnnnaaa 120
annnaaancc cntnnttttt tttnnnnccc cngncccnnt ttaaaaancn tttttnnggg 180
nnccnggggg gggggncccc cncnnttngn aaaaaanccc cnnngggggn nnncccccccn 240
ttnnnanncc nnnnannncc nnnaaaangn tnaaaaaann cccccnnntt ttngggggggn 300
ccccnngnnt tttaaaaaaa aaaccccngg ggccccccna aaggggnntt taaaaaaanc 360
ccccnttttt tncccccngg gggggggnnc cccccaaaaa ancccntttt tttt 414

<210> 94
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 14, 15, 16, 17, 20, 23, 29, 33, 40, 41, 42, 45, 49, 53,
55, 59, 64, 70, 71, 78, 81, 82, 86, 87, 94, 95, 111, 114,
119, 128, 134, 140, 143, 144, 146, 153, 156, 157, 162, 164,
169, 172, 182, 187, 188, 190, 193, 200, 202, 206, 210
<223> n = A,T,C or G

<221> misc_feature
<222> 211, 212, 215, 220, 222, 223, 224, 226, 230, 236, 238, 242,
245, 246, 248, 253, 256, 262, 263, 264, 266, 267, 269, 279,
282, 288, 291, 294, 295, 297, 302, 304, 307, 308, 310, 312,
313, 314, 316, 320, 321, 324, 325, 328, 329, 330, 332
<223> n = A,T,C or G

<221> misc_feature
<222> 335, 339, 341, 344, 347, 354, 355, 356, 361, 364, 365, 366,
369, 371, 384, 389, 391
<223> n = A,T,C or G

<400> 94
acaaagatgn tccnnnngtn ccnaatacnc ttnaaagaan nnganggant ttncntganc 60
tatntatcan ncgcctgnca nntaannagg cccnnaagat gctattacca ngcntaganc 120
gaaccatntg tatnagaaan ccnngnccta tcncanngaa tntnggccna tnttcctggg 180
cngttcnngn acnagaggan cncccnggan nnggnaatcn tnnntncagn ttatcnanac 240
cngcnncntc gcnggngggc cnnnanncna gccttcgtnc cntttaanga nggnncntag 300
cncnctnntn cnnntnatgn ncanngcnnn tnccngtcna naanttntgg atcnnncggg 360
ntgnnngant ncgctcttgg cctnatcant nccatagacc tttct 405

<210> 95
<211> 523
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 128, 155, 217, 218, 230, 234, 237, 257, 260, 282, 286, 289,
290, 298, 313, 321, 336, 358, 365, 388, 396, 411, 426, 434,
443, 451, 466, 467, 473, 481, 482, 486, 493, 508, 510, 521
<223> n = A,T,C or G

<400> 95
aggtctaatc tacaagcgtg gttatggcaa aatcaataag aagcgaattg ctttgacaga 60
taacgctttg attgctcgat ctcttggtaa atacggcatc atctgcatgg aggatttgat 120
tcatgagnat ctatactgtt tggaaaacgc ctttnaaaag gagggccaaa ataacctttc 180
ctgttggggc cccctttca aaaaatttgg ttctttnntt ccaccgtagn ggtnggnaat 240
tggaaaagaa aaaaaanagn aaccccaacc ccccattttt tnttgnttnn gaaaaatngt 300
tggggaagaa aantggcctt ngggccaaaa ccatgngggg tagggggaa ccccaagnaa 360
ttccnaaaac ccaagggggc cttttaantt ttaagnaaaa aggaaaattg ngaaaacctt 420
taaaangggg ttgnttcctt tancccaatt ngaaatttta tttttnnttt tcnttaaaag 480
nncctngggg gtnttggggt tttaaaantn aaaaaaccca ngg 523

<210> 96
<211> 350
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 297, 322
<223> n = A,T,C or G

<400> 96
gctcatcaac acctctgact ttgagttttt tcgtgaaggt gggaatgttt agctcgggag 60
agttgattta taagaaaaag acacgcttac tgaaggcctc caatggaaga gtcaagtggg 120
gagagactat gatttttcca cttatacaga gtgaaaaaga aattgttttt ctcattaagc 180
tttacagtcg aagctctgta agaagaaaac actttgtggg ccaggttagt aggagttttt 240
atccttcctt atattttttc tatgcattta aacagtcagt taacaaaggg aatacangat 300
aatattaaag tcaaatagaa gnacctcggc cgcctctaga actagtggat 350

<210> 97
<211> 282
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 23, 25, 26, 27, 28, 30, 31, 32, 33, 36, 38, 39, 40, 42,
45, 46, 47, 61, 62, 63, 74, 75, 79, 80, 81, 82, 88, 92,
93, 94, 102, 107, 108, 110, 113, 116, 124, 130, 134, 156,
166, 169, 173, 179, 183, 189, 194, 199, 201, 210, 226, 234
<223> n = A,T,C or G

<221> misc_feature
<222> 240, 249, 259
<223> n = A,T,C or G

<400> 97
aggtacntat cgatacccac atncnnnntn nnnacnannn antannntag agtatctatg 60
nnnttccctg actnnatgnn nngtgaangt gnnnacatcc tnccgcnntn atnaanggat 120
actntgactn cctnctcctc actgaggtgc ctcatnctac ccgggngtnc ctntgccanc 180
ctncctggna catntgctng nacctgcccn atgccaggat catggnacca ggcnagaggn 240
cacccgttnc ttcctcccnc atgtagataa atgggtccag gg 282

<210> 98
<211> 224
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 48, 60, 65, 75, 80, 82, 85, 89, 90, 96, 112, 117, 125, 133, 134, 143, 148, 149, 155, 158, 159, 163, 165, 166, 167, 169, 182, 184, 186, 194, 196, 203, 206, 208, 212
<223> n = A,T,C or G

<400> 98
cttagggcga attggagctc cccgcggtgg cggccgaggt cccntacnga cactggcccn 60
agtanacggt gagtnatggn gncanttgnn tgggangagt tcataaatat gnttggnagc 120
taaancgcat ggnntgatgc tcntgaannc taatnctnnt ggntnnntnc agtcatgcct 180
anananсctg gtgnantggt ganatnanta cncaggggtt tggt 224

<210> 99
<211> 223
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 43, 44, 49, 52, 56, 58, 62, 65, 74, 85, 92, 93, 110, 115, 120, 121, 131, 134, 154, 156, 183, 188, 200, 207, 209
<223> n = A,T,C or G

<400> 99
naattggcag ctccaccgcg gtggcggccg aggtacagat canngtggnt tncctncntt 60
gnaanaataa tttngctaaa ccacnaagtg tnncgtgcat tgctactacn ttggntctgn 120
ntccacaaaa nagntttgaa ctctgctaac tcanantctt aaaagaaatc tcctggtcta 180
atngtatnat gaaaaataan aactatnanc cgacaattga gtt 223

<210> 100
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 16, 18, 19, 21, 22, 23, 27, 28, 31, 33, 38, 40, 44, 45, 48, 50, 52, 54, 55, 58, 78, 87, 88, 91, 99, 100, 102, 107, 114, 115, 123, 124, 125, 127, 128, 143, 153, 199
<223> n = A,T,C or G

<400> 100
aggtacagag ntgccnanna nnngggnnct ntncttgnan cacnngantn gntnnctnta 60
acatggggct acttacgnct tcttacnnga ncacttggnn anatttncct ttgnnctaat 120
acnnngnnac gtcatagatg gtntgggaca tantcttcct cccttagaat cgtgggggag 180
cgtgatgatg atccactang tgttagcaat atgcct 216

<210> 101
<211> 411
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 42, 43, 47, 49, 55, 65, 67, 70, 72, 74, 78, 79, 81, 88, 90, 91, 92, 96, 97, 98, 99, 100, 101, 103, 107, 111, 113, 114, 122, 123, 126, 127, 128, 131, 136, 140, 141, 150, 151, 152, 153, 155, 161, 162, 163, 164, 171, 183, 185, 190, 192
<223> n = A,T,C or G

<221> misc_feature
<222> 194, 195, 196, 199, 200, 203, 208, 217, 218, 221, 224, 226, 227, 232, 236, 238, 240, 241, 244, 245, 252, 255, 256, 257, 259, 266, 269, 273, 274, 279, 282, 287, 291, 293, 294, 301, 303, 305, 308, 311, 312, 313, 316, 319, 322, 323, 324
<223> n = A,T,C or G

<221> misc_feature
<222> 326, 327, 331, 332, 333, 334, 341, 342, 344, 346, 354, 358, 361, 363, 370, 374, 378, 382, 383, 384, 386, 391, 392, 399, 403
<223> n = A,T,C or G

<400> 101
atagggcgaa ttggagctcc ccgcggtggc ggccgaggta cnnttananc tccangagaa 60
gtgantnatn ananatannt nctattanan nnctgnnnnn nancatnctc ngnnggtccc 120
annctnnntg ncgatnagan nactgagggn nnntnagaaa nnnnctatgc nttatgcaat 180
tgntntgtcn tnannnctnn tcntatcnac tatagcnntt nctngnnaca tnacantncn 240
ngcnncaatc tngannnant ggatcntcng gcnngcagna antgcanatg ntnnttatac 300
ntncngcnga nnnaanagng gnnncnngct nnnncctatg nnancnttat atgncggnat 360
ntngcacacn ggtnctanta annntnatat nnatttgcng aanatgtacc t 411

<210> 102
<211> 25
<212> DNA
<213> Homo sapiens

<400> 102
aattggagct ccccgcggtg gcggc 25

<210> 103
<211> 30
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2
<223> n = A,T,C or G

<400> 103
cnaattggag ctccccgcgg tggcggcccg 30

<210> 104
<211> 24
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3

<223> n = A,T,C or G

<400> 104
gcnaattgga gctccaccgc ggtg 24

<210> 105
<211> 42
<212> DNA
<213> *Homo sapiens*

<220>
<221> misc_feature
<222> 9, 26, 27, 28, 41
<223> n = A,T,C or G

<400> 105
ctccaccgng gtggcggccg aggtcnnnca acatggtgtt na 42

<210> 106
<211> 20
<212> DNA
<213> Homo sapiens

<400> 106
gagctccccg cggtggcggc 20

<210> 107
<211> 32
<212> DNA
<213> Homo sapiens

<400> 107
ctgattggag ctccccgcgg tggcggccga gg 32

<210> 108
<211> 61
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 108
ngattggagc tccccgcggt ggcggccgag gtacccaaaa caagtgctta aaaaaaaaaa 60
a 61

<210> 109
<211> 121
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 66, 67, 74, 86, 110
<223> n = A,T,C or G

<400> 109

ttggagctcc ccgcggtggc ggccgaggta cnagacccag aggcggctgc tctctccccc 60
cagctnngta aggngcctcc aaaaanaaat tttttttttt tttttttctn ctggggatgc 120
a 121

<210> 110
<211> 21
<212> DNA
<213> Homo sapiens

<400> 110
ctaattggag ctccaccgcg g 21

<210> 111
<211> 81
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 66, 71, 75
<223> n = A,T,C or G

<400> 111
gctccccgcg gtggcggccg aggtaccacc attgtaagga aacactttca gaaattcagc 60
tggttnctcc naaanaaaaa a 81

<210> 112
<211> 53
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 40
<223> n = A,T,C or G

<400> 112
aggtaccttt ngaccccatg gaaaaaaaat atctaacgtn cagaactacc aat 53

<210> 113
<211> 633
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 381, 546, 565, 592
<223> n = A,T,C or G

<400> 113
attggagctc cccgcggtgg cggccgaggt acggtggggc acccaggtag taatatgcag 60
gaagtagaat tggcaacaaa ggacacagaa tgaaatggtg agatggctag cggaaacata 120
gggagaatgg catcacaaag gcaaaggggg gaaagaattt cagtttagtg gatagtcaac 180
caaggcattt cacttagcag tcaggaatga aaaaacgata ctgaatttga acattaggaa 240
agcttggtaa atttcaagag tataatttct gcaaagttgg aacacagtga ataaaaaagt 300
gctaagaaat tgaggacaat tgaaaagttt agcaaatgat aagacaaagc agaagaagat 360
agtagatagt gaggacagca naatcaatag gagggtttct tgggaaggcc atctttgttt 420
taaagtttat ggggagagaa ccagtgtgcg aatggaagta gctaggggga gaaactgaaa 480
atgctaggaa gactgggtgt ggtggctcat gcttgtaagt ctcagctgct cagaagcctg 540

acgtangaga attgcttgac cccantagtt tcgtgaccag cctggaatat anccagaccc 600
tgtttccata aaaaaaaaaa gctaggaagg taa 633

<210> 114
<211> 543
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 433, 440, 498
<223> n = A,T,C or G

<400> 114
tacttttaaa ccaggtgaga aaaattaaat tatgtattct aacaaagtaa tatgtgagat 60
tttgcaaatg attttataga aatacacaaa ataactcttt agcttgctct gagcattttt 120
ttcttttctg atagcaactt tttaacgttg tggatccaca gaacttactg ctttgctttc 180
tcttttgggg tcataattcc tctccccttg gagtgtccac tccatgcatg tgcacttagg 240
atgtgtggct gtgtgtgtgt ttgggaaccc tcacggacac ataaggttct attgtcatca 300
agtagaaaac ctatctcatt atcattataa tgtcttcaga tgctttctaa ggttcacctc 360
tttttaaca ttagaagtca gtgaatgcag ctttcattat aatttttaat actttaaaat 420
gtttttgtat tanctgccan aatgctcagc agcaaaagtt atgactcact tctagcaagt 480
gtggtagttc tttgcttnaa gcatttgggt ttcatgtagc ttttcttctt atttttttctt 540
tgg 543

<210> 115
<211> 329
<212> DNA
<213> Homo sapiens

<400> 115
gggcaggtac ttttttttat tttttatttt tttttatttt tagtagagat ggggtttcgc 60
catgttggcc aggatggtct cgatctcctg accttgtgat ccacatgcct cggcctccca 120
aagtgctgag attacaggtg tgagccaccg cgcccggaag gggaaggatc tctttattca 180
aatacgcaca tgcacgtgca cagatacctt gcatctgtga aaggaagcta agaaatctgc 240
agtcggcagc tatttggaac tatggcttat aaacttatgt ttttcaggag acagagaaac 300
caagacttgg gccagtcttt gcagtgacc 329

<210> 116
<211> 329
<212> DNA
<213> Homo sapiens

<400> 116
ccgggcaggt acttaaacac caggcggaca tttctccagg aagcattcca tagctgtctc 60
ctccccccacc ttccaaaggt cacagagaac cctgggccca cctctgtggc tgcagtcact 120
gtgctgattg tcatgtctgt ttacttgtat atttcttggc taccctgtta gctgcacagg 180
ggagagacag atctgatttg atttggtatt gctagtgtga gacatagacc ttggtgctca 240
atatatgttt gtgaaaaatc acagaagagg ccataaactg gggcagaaa atcaaaagca 300
ttaggtcaaa agatatcaga ggattcaca 329

<210> 117
<211> 208
<212> DNA
<213> Homo sapiens

<400> 117
aggtaccaaa attctaactt agggctttag agttcctgga ttccaaggga atgcactctt 60
acatatacta catcatgtgc tgctcaccat ccatgtggtg atgaggagca ttagataagg 120

agcattaggt ccatgtagca gaacagtaaa ctgaagctcc gaacagcgaa ggagctcacc 180
caagagagca cagggctagg atcaggaa 208

<210> 118
<211> 610
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 319, 463, 518, 546, 553, 554, 579, 599
<223> n = A,T,C or G

<400> 118
ccgggcaggt acaatttatt gcagacccag acacgagaag gtcagagaaa atcagagaaa 60
gcaagcaagt gaatttgcct tactctagga cccacacttt ggtgatcaca gctggatgaa 120
gaatgtcagg ggatgaatcg gaagaaatga aactggaaag aggaaggaac caagtcttga 180
agggccttgg aagccatgtt aagaaggatg aatgagaggt aaagaagacg acattgagct 240
ttctcacttg ggcagttggc ggatggcagt tggtggatgg cagtgggtgg atgactttac 300
tgaggtagga agcctgagna ggaaaagcag gttttgaggg agagtttgac taattgcagt 360
ttaagacatg tcatgtcgga aacatcatgt atcacactgt cccagtaagt agtttgaaga 420
caaagatctg gatctcaaga gaaggagtat ggggctgaag atngcaatta tgggaactat 480
tgctacattg gttgggttat taaagacaaa agaagttngc ttgaaatttg ccaaggggag 540
agtttnacca ganngagaaa accaggcccc aggattagna gcttcccaaa ggaactttna 600
aaaagttaaa 610

<210> 119
<211> 133
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 75
<223> n = A,T,C or G

<400> 119
ggggccattg agactgccat ggaagacttg aaaggtcacg tagctgagac ttctggagag 60
accattcaag gcttntggct cttgacaaag atagaccact ggaacaatga gaaggagaga 120
attctactgg tca 133

<210> 120
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 77, 320, 321, 371, 378, 397
<223> n = A,T,C or G

<400> 120
aggtactgtg ctcagccagg agaggcccag cattgctcag tggctatgct cctgacggat 60
tctgatgatc gatgtanacc ttcggagatc actgatacct agccacttaa tctcgttcct 120
cacagccaga gaatatacgt aagtaaattg cagaagtgtt ggactcagga gaggccagtt 180
agttttgggg cacctctctt acagagctct ttgggtggaa agaagaagtg gtgaaatgac 240
ctatgcttct gtttcatcat gacagggaaa tctggaaggg gaattcagtc tagtgaattt 300
acttaaaata ttagctgcan naaactaatt tacaggggaa agcggctttg tgacattttt 360
aagtgtagaa ngatccanat gagaaatgtg aatttcntac cagaaacttt ggggtagtcc 420

t 421

<210> 121
<211> 698
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 249, 421, 456, 578, 595, 601, 604, 650, 651, 654, 663, 666, 679, 686, 687
<223> n = A,T,C or G

<400> 121
aggtactttt tggttactac ctttacagac ggcatcaaca tggaccctca cacctgcacc 60
tgagcaatgt gggacatttg attcctcatg gtgacagttt ctttcccacc ccaagctcca 120
gggagacagt aagctttctc atcatttctc tgggcttgtg ggcaaacatt ttttagtcta 180
tgggaacagg gagcacttcc agactctatt cttcatgcag gaatcttaat taaaacctct 240
ccacctcana tatgcctgca gccacgtccg ttgtccccaa acagatatta aaatccagca 300
ttaggaccac ttagccctat tcctatttga aagcctcttt gggcagccat gatatcatta 360
ttattctcct tattctggga ttgctttttt acttcatttc ttcttctttt taaagtatta 420
ngctctattg agatataatt cagatatcac accaantcac ctatttaaaa gtataccaat 480
tcaatgggtt tcttagtata ttcacagagc tgggcaacca tcaccacaag ccaattttta 540
agaacatttt ttcttaccct aaaaaaaaga aacccccngt accctgcccg gggcnggccg 600
nttntaaaaa ctaagtggaa tccccccggg gcttgcaagg gaattccgan nttnaaggcc 660
ttnttngaat acccggccna ccctcnnagg gggggggg 698

<210> 122
<211> 472
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 254, 306, 381, 416, 441, 448
<223> n = A,T,C or G

<400> 122
ccgggcaggt actttaatac ctgtgatcaa ggtgtcttta aataattgct ttcatctgtg 60
aatggcgaaa ttactagcat aataagattg ctgtaatatt ggtcagcttc tggagtagat 120
agataaagaa ttgtgtaatc agtttgtgtc cccagctgag gggatattcc ttctcttctc 180
gttttatatt aattgaatta ttttttaact ccaaaaagaa atacatactt attgttacta 240
attaaatagt gcanggttat tcaaaagaaa tcttaatttt tctttcacta cctccctaag 300
gaaggntaac gttcactatt cagtatcttt tcatactttt ttctttggtt ctacagtaaa 360
cataaaatag ctatatatag nggccccttt taaataaaaa tgtggattgt gcaatnacaa 420
caattatttt tattcctttt naaacacntt gtttcaaggg gttcttgggg cc 472

<210> 123
<211> 189
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 115, 183
<223> n = A,T,C or G

<400> 123
ccgggcaggt acctgaggtg accccaaaat tcatccaaat attctatcca agagcaggca 60

aatgctacat gggaaatcac aaagaggagg aaaaaaagag agagaagaga caaantgaag 120
ctttgacaag cagctcagct gggccagccc cttggaaggg agccagcatt gggaaagcag 180
cancagctc 189

<210> 124
<211> 399
<212> DNA
<213> Homo sapiens

<400> 124
cgaattggag ctccccgcgg tggcggccgc ccgggcaggt accatggcac atatgtgagg 60
ttttcttcaa aacagattgt gttgcaggaa ctgaaacacc accaaaaaca atcccattaa 120
atgtgggcaa aggggccggg cctggtggct cacacctgta agcccagcac gcctggcccc 180
catattctta actaccaagc tgtatgctct ctgggatcct tcacaaaaca tgaatgtcac 240
tgctctgctg tatgcctcca gtctccccat ctctcctctc ctccatcatc ataccttttc 300
cagcctgtcc cttgtgcagt tcttggctca ccatctgagt atctatgaga ctgcttaaag 360
tctctctgcc tggaattaaa acttgcaaat gaaagcctt 399

<210> 125
<211> 355
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 71, 88, 92, 108, 253, 332
<223> n = A,T,C or G

<400> 125
ggcggccgag gtacctttct ttccaggcca tggcaaaaaa aatccaatta tgtccgtctt 60
gagtctgtgg ncttgcttct tatgtagnat tncctttgtg agctgaanat taatgcatgg 120
attcacctcc ttcagcacat ttcatttcaa ttgtgaagaa aagattccag gcactgaatg 180
taaaattgaa catgacattt tgacattcct tcttctgaga gctgggttgg tcttagttgc 240
tgtgaggctc tanacaccga ccatacaggg cgtggggctg ctcctggaca tgaacatact 300
tacgaagttc tccccaatcc actttacccc gnccccgcgt acctgccccg ggcgg 355

<210> 126
<211> 323
<212> DNA
<213> Homo sapiens

<400> 126
ccgggcaggt acgcgggggc gcgacttccc tggcccgccc cctgcggacc agtgaacctc 60
gcccgagggc tcaataaaga agatttttgc cctctttttc tcacctctca gccttattga 120
tccatggtgc ccttccattg cctttcattg gtgccgaaac ccgggagggg acacctccta 180
agccccccca gaggctcagg gggactcccc tcctggtcgg atcagtcctc tccctcagtc 240
aggtcaggct tctcctccac ggccatctgt ccatttcgtc cggttacttg ctaccaggtc 300
gcagttgctg cagctactcc agt 323

<210> 127
<211> 334
<212> DNA
<213> Homo sapiens

<400> 127
aggtactttc ccagaggaac cattcatcaa gcggacactc ctgcggggct ggcccactcg 60
actcacgtga ccatcagcac ctaccagaac aagtaaacac tgcctcccag ctgcacatgc 120
taggacagct ctgagtcctg gcctgcagca gccacattca ggagggatat gagggagttg 180
gcccctacct cctacgcaaa ccccagggtt tatgtccttt actgacttcc acattccttt 240

gatgtcccat gtatgtgact ggtccctctg gacttgcttc tggggacatc atgaacctga 300
ctctgtagga tgtggggcat tgcccaaata gaga 334

<210> 128
<211> 350
<212> DNA
<213> Homo sapiens

<400> 128
ccgcggtggc ggccgaggta cagcctgtgg aactcttgaa acatggattt tttcctaata 60
attgaagacg gttcaagaaa atatcttcta caagaaaata tgcaactagg agtcctgcaa 120
tgaaccgttg tttgctttct tcaatatcaa ttataataat attttatctt taaaatcaga 180
attttaccga aacagttttg tcattttatt atttaactga tgagaaaaac tatatgtgat 240
ttagagttgc catgagtcct gattcaaatc agattacttt tcttttgcta aaaacttagc 300
gcagtagccc acctacaatc ctgcttgctt aaggggaaat ggtacctgcc 350

<210> 129
<211> 395
<212> DNA
<213> Homo sapiens

<400> 129
ccccgtaata ccgacctcac tatagggcga attggcagct ccaccgcggt ggcggccgag 60
gtaccccaaa caagttttcc tattttattt ttatgcttac agatactcaa atattaacaa 120
tttaattaat caccagctat taaaatcatg aaaacatcat gaacacacac taccggtgtg 180
gatctccaca gtgctgagtt tttagatgac attccctaca ccccttcctc tatgaagagt 240
ttcacaaaag acgtctttag aaggtaaatc tagcctatga aatattttaa gcaaaagaca 300
gaaagaagtc tcaaatgtat gtggtgtatg tggggtgtgt gtgtgtgaga gagagagaga 360
gaaagagaga gggaaagaaa gacacagaga cagag 395

<210> 130
<211> 597
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 493, 563
<223> n = A,T,C or G

<400> 130
aggtacattt tgaactccca attcccaccc acagagcttg gtgctagctc tgcacacggt 60
agatataagc aagaacttag gccgaagtga attgaatgac ccattcttac cagataattc 120
tgttcttgca ggggtatttc ggatctgggt tctgcctcaa ggctgacgga atcaatacat 180
tcagcaagtg tatcctcagt cacgtctcca ttgagagggg gctccagggc gttggcatcc 240
tgaggctgca caggggggccc aatggcggca gcccctgcac cctgcacagc tgcattttca 300
tgcccctccc ctctggggtc agctggtgtt ggctcatgtg aaactgcagc tgaatcacaa 360
tgcacttctg gcatcctcag gtaaagaatc actattaggc atctcagtaa cttctgcttt 420
gtctccagtg gctaaggtgt cacccagcat catcagaaca tttttagtat cgctcaaggc 480
ggcccgctct agnaactagt gggatccccc cgggctgcaa ggaattccga tatcaaagct 540
tattcgatac ccgtcaaccc tcnaaggggg gggccccggt accccaactt ttttgtt 597

<210> 131
<211> 238
<212> DNA
<213> Homo sapiens

<400> 131
tgcttctgct atggcgagga gtcctcggcc tccagccact gtgcccacgc ctaccggttt 60

tctggggatg ttgccaccac ctctgaagag tgaaaccaag ctttccatgc aggaagagcc 120
aggtgctggg ggctcccgcc cgaactgtga ggcccacagt gcttagggag agcaccaggc 180
tctacctttc tttcttgaca gtgggtgagc agcgcaggca gagatgtgca aggtacct 238

<210> 132
<211> 351
<212> DNA
<213> Homo sapiens

<400> 132
ggaccgaggg tttggtgcac ctcgatttgg aggaagtagg gcagggccct tatctggaaa 60
gaagtttgga aaccctgggg agaaattagt taaaaagaag tggaatcttg atgagctgcc 120
taaatttgag aagaattttt atcaagagca ccctgatttg gctaggcgca cagcacaaga 180
ggtggaaaca tacagaagaa gcaaggaaat tacagttaga ggtcacaact gcccgaagcc 240
agttctaaac aattattttt actaaaatgc ataattatgt gatagttata catataccaa 300
cctgttatgt gagacaagct gacctgcaag tagtccaagg ccagtgaatc a 351

<210> 133
<211> 353
<212> DNA
<213> Homo sapiens

<400> 133
aggtacacgt ctctgtctgg gcctcggcca gggtgccgag ggccagcatg gacaccaggg 60
ccagggcgca gatcaccttg ttctccatgg tggccattgc ctcctctctg ctccaaaggc 120
gaccccgagt cagggatccc cgcgtacctg cccgggcggc cgaggtacca gccgctcatg 180
tttttatcgc acccctggga ccctgctgag ttctctgtgc ttcggaaggg ttcatccagg 240
agggtgtaat tctgacaggg gtcaaaacag acatgagcct ctggggtgcc aggagctccg 300
cagtccaggt ccagcccata cgaactggct tcaatggggt ttccataacc tcg 353

<210> 134
<211> 544
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 544
<223> n = A,T,C or G

<400> 134
aggtacttga gcctaggcaa cagagccaga ctcagtcctt taaagaaaaa aaaaaattct 60
cccaacttca taagtaaact gcctaaacaa atcaggattc attttaccat tcatttagca 120
gaagaggaag gtaacagaag ttcatatatt tcgccagata actttatcac cctccaaccc 180
agactagagg ttttgattta attatctcaa atgaacttta attattttga acttatgatt 240
accataatac ctcttgttag aaaagtgaga tttctaaaac ctagtaagta atcgtaaagg 300
tataatttta ccaccagtaa tgcaagttct taacagctgt cttggcctca ggggtcataa 360
actaatggcc tcagtaataa aatatttaat agaaattaat gagataggcc caatgatgtg 420
ggccaagtaa agagaggaga aataagaatt ggtgggaact gtggcaaatc ggagagagta 480
tgcacatcta aagggactca gagcaggtta attccagccc ctgtataccc cgcgtacctg 540
cccn
544

<210> 135
<211> 150
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 147
<223> n = A,T,C or G

<400> 135
ccgggcaggt acaaggggca ttgtcagtga gtggtaatac tttgaaagga atcttatttc 60
ttgagcagta gttgtcgaca gtgggcttaa gatattcaat aaaccatatt tgtaaaccgg 120
aaaaaaaaaa aaaaaaaaaa aaaagtncct 150

<210> 136
<211> 546
<212> DNA
<213> Homo sapiens

<400> 136
ggcaattgga gctcaccgcg gtggcggccg cccgggcagg tacgcggggg gtcccagcgt 60
cgctccggac gctgccaacc tgttctccac cgtcgctcga cttccacctc taagactccc 120
accttcaaga tccttctgtc tagtgttttg ggttccctac accaggattg tggaggaagc 180
gcacggccag aacccgttgg gaccgagcag atcaaccatt tatgttgcac ttaatgatca 240
tctgcacttt ttgcatatcc ttagtgttgt ctttgtgagg ccacctctat aatggataat 300
caaatagagg gaagggcggg attgaatatt gtgacttgat ttcaatgtcc cacaacaact 360
gtgctagaca gtttttatat gttaggttat ttaacgctcc caagcactta ttaaagtgat 420
gttactctgt ttcattctcc aggaaactca ggttgaataa ttcatcaaat tacacaactg 480
aactcaaaga catggctgcc cagtgtgtca caaaggtggt gctgaatgtt tcccgtgcca 540
atcttt 546

<210> 137
<211> 546
<212> DNA
<213> Homo sapiens

<400> 137
ggcaattgga gctcaccgcg gtggcggccg cccgggcagg tacgcggggg gtcccagcgt 60
cgctccggac gctgccaacc tgttctccac cgtcgctcga cttccacctc taagactccc 120
accttcaaga tccttctgtc tagtgttttg ggttccctac accaggattg tggaggaagc 180
gcacggccag aacccgttgg gaccgagcag atcaaccatt tatgttgcac ttaatgatca 240
tctgcacttt ttgcatatcc ttagtgttgt ctttgtgagg ccacctctat aatggataat 300
caaatagagg gaagggcggg attgaatatt gtgacttgat ttcaatgtcc cacaacaact 360
gtgctagaca gtttttatat gttaggttat ttaacgctcc caagcactta ttaaagtgat 420
gttactctgt ttcattctcc aggaaactca ggttgaataa ttcatcaaat tacacaactg 480
aactcaaaga catggctgcc cagtgtgtca caaaggtggt gctgaatgtt tcccgtgcca 540
atcttt 546

<210> 138
<211> 418
<212> DNA
<213> Homo sapiens

<400> 138
ccgcggtggc ggccgaggta ctgggaatgg gaagttttct gaataagggt aacatggggc 60
agaatttgtc tattgaggtg caacattatg tgcatttgct taaagtttta cttaaacaaa 120
ctggtgctca ggttagttct caaacattaa ttaagatgct gaagaaggtc actatacata 180
acccgtggtt tccacagaca ggcagtcttg atgtagaaat ttgggacaga gtaggaccag 240
gattaaaacg ggctcaccaa aaaggtctta aatttgatct ttttgttttt tctgcttgga 300
gtttagtccg tgctgtcctc ctgccattat cttcttctta ttctgctaga cagcaggaat 360
catattccga gtctaaaaat ctgaaaaaat attttgtccc acccacagta cctgcccg 418

<210> 139
<211> 229
<212> DNA

<213> Homo sapiens

<400> 139
ccgggcaggt acgcggggta actttttaac tttataaact tagtatttta actttttaaa 60
ctttttttgtt gaaaactaag acacaaaaac acatgttagc ctagatccac acagggtcag 120
ggtcatcagt atcactgtct tccacctcca cattttgtct ctggaaggtc ttcaggggca 180
ataacacaca tggagctgtc atcgcctgtg gtaacaacgc agagtacct 229

<210> 140
<211> 149
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 146, 148, 149
<223> n = A,T,C or G

<400> 140
ctactatagg ggcgaattgg agctccaccc gcggtggcgg cccgccacag tcgctgcgga 60
ggggtctgag gacaggcggt cctgactccc gctgcccggt ggaactaaga ccagggacga 120
ggccacgcag gagatcaagg tacctntnn 149

<210> 141
<211> 389
<212> DNA
<213> Homo sapiens

<400> 141
ccgcggtggc ggccgcccgg gcaggtacaa gcagtaattg attcactggc cttggactac 60
ttgcaggtca gcttgtctca cataacaggt tggtatatgt ataactatca cataattatg 120
cattttagta aaaataattg tttagaactg gcttcgggca gttgtgacct ctaactgtaa 180
tttccttgct tcttctgtat gtttccacct cttgtgctgt gcgcctagcc aaatcagggt 240
gctcttgata aaaattcttc tcaaatttag gcagctcatc aagattccac ttctttttaa 300
ctaatttctc cccagggttt ccaaacttct ttccagataa gggccctgcc ctacttcctc 360
caaatcgagg tgcaccaaac cctcggtcc 389

<210> 142
<211> 253
<212> DNA
<213> Homo sapiens

<400> 142
cgtaatacga ctactatagg ggcgaattgg agctcaccgc ggtggcggcc cgaggtacct 60
gttggcttca tttctcttat taccctgttg ccaggccacc gggtccggcc cagccttgat 120
tcttcgggaa tcacttctcc ctcgccgcgc ctgttactgc ctccacggat cactcatcct 180
cgcttcgcgt tcttccacta aagaacctgg ggcgccgcac tacagcgccg cggcctcccc 240
gcgtacctgc ccg 253

<210> 143
<211> 369
<212> DNA
<213> Homo sapiens

<400> 143
cgaggtacta gcagtaattg attcactggc cttggactac ttgcaggtca gcttgtctca 60
cataacaggt tggtatatgt ataactatca cataattatg cattttagta aaaataattg 120
tttagaactg gcttcgggca gttgtgacct ctaactgtaa tttccttgct tcttctgtat 180
gtttccacct cttgtgctgt gcgcctagcc aaatcagggt gctcttgata aaaattcttc 240

tcaaatttag gcagctcatc aagattccac ttctttttaa ctaatttctc cccagggttt 300
ccaaacttct ttccagataa gggccctgcc ctacttcctc caaatcgagg tgcaccaaac 360
cctcggtcc 369

<210> 144
<211> 207
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 11, 27, 31, 39, 41, 44, 47, 54, 55, 61, 72, 73, 76, 80,
82, 83, 84, 86, 93, 98, 103, 104, 109, 112, 113, 122, 124,
126, 134, 139, 145, 151, 155, 161, 163, 165, 167, 168, 169,
171, 173, 176, 177, 178, 179, 184, 187, 188, 191, 193
<223> n = A,T,C or G

<221> misc_feature
<222> 194, 195, 198, 201, 202
<223> n = A,T,C or G

<400> 144
aggtacttgn nccaaatgtg caacatnaat ncggaaccna ngancanaag actnnttacc 60
natactggaa cnnggncaan tnnnanccca cgngaatntt ctnngtcana tnnccacatc 120
cncncngtgc tgcngaggnt gtgcngactg nactncttgt ncnanannng ncnttnnnnc 180
tctnccnnac ngnnnatncc nntgccc 207

<210> 145
<211> 134
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 18, 29, 38, 42, 48, 52, 53, 54, 57, 60, 63, 70, 72, 77,
78, 90, 108, 114, 122, 130
<223> n = A,T,C or G

<400> 145
ngaacatcaa cttttganct tttagtgang gtatatancg cnctcggnct tnnnatngan 60
atnccttgtn antgtgnnaa atctgtatcn cgcttacaat aactaccnac gtangcagcc 120
gngagcatan gagc 134

<210> 146
<211> 338
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 154, 187, 317
<223> n = A,T,C or G

<400> 146
ncgccccggc aggtacaggt atttgttgca ttattctaac aactttactg cagatttcac 60
tttttcaaaa ctaaaagttg agggaagggg aaacaccaaa aaaccctccc acggccactc 120
gccctgcttg ggctgctgct ttttgagatc tcanaaagtt ggacaagggc catgaccagc 180
agcctgntcc aaaacaacaa ctaggaacct gctgtgggtc acaagcttgg gaagctgctg 240
ggggcagatt tcactttgtg cttctgggtg agggcagggg cgtgagggtg ataaaatact 300

tttgtgagct gaacagnggg gaaacaaaag tttcaaaa 338

<210> 147
<211> 567
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 533
<223> n = A,T,C or G

<400> 147
ccgcggtggc ggccgaggta ccttctcaca cctgcgttct tttcttgaga gatactgtga 60
taaaataaac agtgagattc ccccactccc tttcccttca tcaagagaac accacagttt 120
tctcaagctg tgcctgaagc tctttcaaat caccttgctc ttgcacttgc gggaggggta 180
gctaccagca ttctcgggag gcaggcaggt ccacttcgaa atttgctctt cagactgatg 240
gactcaactg tcccagatga aatccaagag taatgaagat attctaaatt ggatagtggt 300
gatggttgca caactctgaa tagactaaaa accattgaat tttatacttt caagaggtga 360
attctgtggc atgtggatta tatgtcaatt tgaaaaaaaa aaataaactg acttttcaag 420
tagagggaca tatcccctca aatggggttg gaggaatatc ctggtggtga gtaggaactg 480
tgatgattta atatttatca gaaacggggt agtgtaagat tttgaaaagg gtnaaaagta 540
cctgcccggc cggccgctct agaacta 567

<210> 148
<211> 190
<212> DNA
<213> Homo sapiens

<400> 148
cactacttag ggcgaattgg agctccccgc ggtggcggcc gaggtacact cttccttaag 60
tccagtggtg caggaaagct tcagtttgtc aatatcacgc aagacaggga caccaaacac 120
tacccctgcc caaaggagcc cctcacggac gccgccatgt tgttaccgga cccccccgcg 180
tacctgcccg 190

<210> 149
<211> 157
<212> DNA
<213> Homo sapiens

<400> 149
acttagggcg aattggagct caccgcggtg gcggccgagg tacgcggggg aggaactgct 60
cagttaggac ccagacggaa ccatggaagc cccagcgcag cttctcttcc tcctgctact 120
ctggctccca gacaccactg gagaaatggt gatgacg 157

<210> 150
<211> 60
<212> DNA
<213> Homo sapiens

<400> 150
gtcacgatat tactacccac ttagcctggt acctgcccgg gcggccgctc tagaactagt 60

<210> 151
<211> 45
<212> DNA
<213> Homo sapiens

<400> 151
tagtgagggt taatttgcgc gcttggccgt aatcatggtc ataag 45

<210> 152
<211> 382
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 76, 77, 100, 101, 143, 149, 154, 155, 184, 230, 305, 354, 356, 358
<223> n = A,T,C or G

<400> 152
acttagggcg aattggagct ccccgcggtg gcggccgccc gggcaggtac gcgggattcc 60
tggcttttta actttnncaa atgtaacctc ccatgtgctn ngagaaagga aaatttaaga 120
cagcttatga aagggaggag aancaacana tggnncaggt cacccaaatg ccaaccatga 180
aagngctcat tttctaggct aaaaattgaa cctgaactca ggccaccatn gtgaaaagac 240
aaagccttaa ctgctaagct acacgcattg ggcagtttcc actgcttttc ccagaaggag 300
cccanagcag ggaattttga gcttgcaaag gcttttaact gctcaagata attngnanag 360
ctaactacta ccccaaaatc cc 382

<210> 153
<211> 186
<212> DNA
<213> Homo sapiens

<400> 153
ctacttaggg cgaattggag ctccccgcgg tggcggccga ggtacgcggg aagatctaca 60
ctattatgtc accccagaaa gtgaactctc agtcttccca gccagtctct ttcttatcat 120
aggttagctt gcttattctg gaatttcgcg tatacagatg catgccatgc cataggtacc 180
tgcccg 186

<210> 154
<211> 151
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 77, 90, 97, 99, 103, 107, 108, 113, 114, 116, 151
<223> n = A,T,C or G

<400> 154
gggctattgg ttgaatgagt anggctgatg gtttcgataa taactagtat ggggataagg 60
ggtgtaggtg tgccttntgc taagaactgn gctaggncnt ttncaanntt acnncnaaag 120
cctataatca ctgcgccccc cgcgtacctc n 151

<210> 155
<211> 137
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 46, 52, 56, 59, 86, 100
<223> n = A,T,C or G

<400> 155
cgggctgcaa ggaattcgaa tntcaagctt tatcgatacc cgtccnacct tntatngtng 60
tgggcccggg aaaccccaaa tttttngctt cccctttttan atgaaggggt taaatatgcc 120
gccgccttgg gccgtta 137

<210> 156
<211> 385
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 64, 221, 222, 231, 365, 374, 385
<223> n = A,T,C or G

<400> 156
ccgcggtggc ggccgaggta caagcagtaa ttgattcact ggccttggac tacttgcagg 60
tcancttgtc tcacataaca ggttggtata tgtataacta tcacataatt atgcatttta 120
gtaaaaataa ttgtttagaa ctggcttcgg gcagttgtga cctctaactg taatttcctt 180
gcttcttctg tatgtttcca cctcttgtgc tgtgcgccta nncaaatcag nggtgctctt 240
gataaaaatt cttctcaaat ttaggcagct catcaagatt ccacttcttt ttaactaatt 300
tctccccagg gtttccaaac ttctttccag ataagggccc tgccctactt cctccaaatc 360
gaggngcacc aaancctcgg tcccn 385

<210> 157
<211> 150
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 60
<223> n = A,T,C or G

<400> 157
tggaacncca ccgcggtggc ggccgcccgg gcaggtacct ttttgccctg cagggactgn 60
acctgctgtg ggatttgaat acaaatggtg gaacacgctg cccacaaaca tggaaacgac 120
cgttctcagt gggatcaact tcgagtacct 150

<210> 158
<211> 345
<212> DNA
<213> Homo sapiens

<400> 158
ccgggcaggt acccagggaa caaatgctac tgggactcca cacctaccta agaagcagct 60
ctacccagac tccacatggc tctctgtttt ggtctggaga ccccagctgg ggtatctcct 120
gagcccaggg attcaaaggt tcgtggcaga aatatgcatc ccacgggact ctcactcact 180
caccattttc ttgtaggggg attcccctgg gtctgtgcca ctcctgggtg aatggctgat 240
ctgtctcact cttctccgtg atccgaaggt cacactatgt cactgatgaa tccttatgtg 300
tccacctgga tgttccggtt gaagagctag tgtctcacca ctctt 345

<210> 159
<211> 189
<212> DNA
<213> Homo sapiens

<400> 159
cgcccgggca ggtactctcc ctcttttcct agggatgtgg cttcctgaga gccaagttgt 60

agtgactgtc atctctcttg tggatctagc cacccagcag gtctaccagg ctctgggctg 120
gtgctggggg ttgtctacac tgggtcctgt gatgtgaacc atctgcagat ttctcagcta 180
tgggtacct 189

<210> 160
<211> 308
<212> DNA
<213> Homo sapiens

<400> 160
ccgggcaggt acctgccaca tgtcgggccg gtcagcacag gttttctgca gggcttctgg 60
ctgggctggc aaaaagcagc agggagcagg acaaagcttt ttttctggcc tgactccccc 120
ttgctgagcc cagcgctgcc acctgggtgg atggtccccg gggccctatt cccagttgct 180
ccagagccac tatttaggat ccaggttgtg ccaccaagtt caaggctggt tgtgatggtg 240
agaacagctg ctttcataga aaaatcatca tgtcctagca cagatggccc caagcagggg 300
aagtacct 308

<210> 161
<211> 77
<212> DNA
<213> Homo sapiens

<400> 161
ccgggcaggt accaagcaga aacctggcca ggctcccagg ctcctcatct atggtgcatc 60
caccagggcc actggta 77

<210> 162
<211> 201
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 181
<223> n = A,T,C or G

<400> 162
cgcagtataa taactggcct ccgaccacct tcggccaagg gacacgactg gagattaaac 60
gaactgtggc tgcaccatct gtcttcatct tcccgccatc tgatgagcaa gttgaaatct 120
ggaactgctc tgttgggtgc ctgctgaata acttctatcc cagaaaaggc caaagtacct 180
ngggccgctc tagaactagt g 201

<210> 163
<211> 392
<212> DNA
<213> Homo sapiens

<400> 163
aggtacaagt cataatctct tttcaagccg gcctagcccc ttcccggaac ctcggctccc 60
ccccaacgaa actactgcta agccaactgg actacacttc ccagactgct tggagcctct 120
ctctccgcag aacctcgtct tccgcgagct tttcctggag gttctaggag ggatgcccct 180
caatgccacg acgccatttc ctactacccc cgcgtacctg cccggcggcc gcccgggcag 240
gtacagcaaa acccacctgt gtaaacacac acagcaaagt gatgtaagaa gtttccatat 300
aaagggctgc agtatggaga ggtaatgtgc aggctggttt gcggctgtag gggccacctt 360
gctgcagctc tccactgata tggtacctcg gc 392

<210> 164
<211> 285
<212> DNA

<213> Homo sapiens

<400> 164
ccgcggtggc ggccgcccgg gcaggtaccg cagcagagca ctctcagctc tgggtcttgc 60
aggcgcaggg ctccccatg ccagcagaaa gatttcctct ggacaggcga cactaacagg 120
tgaagatctc gggagaccat gactaagaaa agaattgctg tgattggggg aggagtgagc 180
gggctctctt ccatcaagtg ctgcgtagaa gaaggcttgg aacctgtctg ctttgaaagg 240
actgatgaca tcggagggct ctggaggttc caggaaaatc ctgaa 285

<210> 165
<211> 383
<212> DNA
<213> Homo sapiens

<400> 165
ccgcggtggc ggcccgaggt acaagcagta attgattcac tggccttgga ctacttgcag 60
gtcagcttgt ctcacataac aggttggtat atgtataact atcacataat tatgcatttt 120
agtaaaaata attgtttaga actggcttcg ggcagttgtg acctctaact gtaatttcct 180
tgcttcttct gtatgtttcc acctcttgtg ctgtgcgcct agtcaaatca gggtgctctt 240
gataaaaatt cttctcaaat ttaggcagct catcaagatt ccacttcttt ttaactaatt 300
tctccccagg gtttccaaac ttctttccag ataagggccc tgccctactt cctccaaatc 360
gaggtgcacc aaaccctcgg tcc 383

<210> 166
<211> 480
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 417, 423
<223> n = A,T,C or G

<400> 166
tcctataggg cgaattggag ctccccgcgg tggcggcccg aggtactcaa aggtgatatt 60
tgctttttc aatgcttcag ggaaaaatc cttttcttta caaacttcca tcagtttagg 120
agtcagtctg tatgccttta gtgagagaga tccttgggca gtttttatgg gatcataaat 180
gagaacgaca gattcttcaa tggcatgctg gtaactaaac tgagagtccg ggagtgcccg 240
ggtaacgaat gagccatagt atgtggactg ataccagccc acgtgaagat gatcaatgtt 300
tacatggcga agctccgcat catttccatc ttgatattgg acagaacctc tagctgagct 360
tgtcctcttc acactgagta atgggttatg tttcttccct gagggcctaa acttttnatt 420
tgntcttatt aaatattatt ctcttttaaa agcttctaaa tttcaactgg ccctgattac 480

<210> 167
<211> 389
<212> DNA
<213> Homo sapiens

<400> 167
cggccgaggt acagtgcaga ggactggaat ggatataatg tctgcaaaac aaaaacatgt 60
ctagtgagcc atctactaat ctcaaccact ggtctaactc atgacagtct caaaatgaat 120
atttaagaaa aaagtagtgg catctaaaaa tatagacgtt ttgcaactga ctcagggaga 180
gctctttctt caactactga atatactggt tttaaatgat ggagtgagac aaagaggctc 240
ttgctgacgt gctctacttt gatttctatc ctaaaatcta acaggtaatc aatgtgtttg 300
gctacctata ggagcatcca ccaactgata tcattttttt tttttttttt gagatagagt 360
ctcattctgt cacctaggct ggagggcag 389

<210> 168

<211> 397
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 323, 336, 389
<223> n = A,T,C or G

<400> 168
ccgcggtggg cggcccgccc gggcaggtac aagcagtaat tgattcactg gccttggact 60
acttgcaggt cagcttgtct cacataacag gttggtatat gtataactat cacataatta 120
tgcattttag taaaaataat tgtttagaac tggcttcgga cagttgtgac ctctaactgt 180
aatttccttg cttcttctgt atgtttccac ctcttgtgct gtgcgcctag ccaaatcagg 240
gtgctcttga taaaaattct tctcaaattt aggcagctca tcaagattcc acttcttttt 300
aactaatttc tccccagggt ttncaaaact tctttncaga taaggggccc tgccctactt 360
ccttcaaatc gaggtgcacc aaaccctcng tcccggc 397

<210> 169
<211> 495
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 446, 448
<223> n = A,T,C or G

<400> 169
ccgcggtggc ggcccgaggt acgcgggtcc ccatgtgtga cgccggtgag cagtgtgcag 60
tgaggaaagg ggcaaggatc gggaagctgt gtgactgtcc ccgaggaacc tcctgcaatt 120
ccttcctcct gaagtgctta tgaaggggcg tccattctcc tccatacatc cccatccctc 180
tactttcccc agaggaccac accttcctcc ctggagtttg gcttaagcaa cagataaagt 240
ttttattttc ctctgaaggg aaagggctct tttccttgct gtttcaaaaa taaaagaaca 300
cattagatgt tactgtgtga agaataatgc cttgtatggt gttgatacgt gtgtgaagta 360
ttcttattta tttgtctgac aaactcttgt gtacctgccc cgggccggcc cgttctagaa 420
actagtggga tcccccccggg cctgcnanga aattcgatat caagcttatc cgataccgtc 480
gaacctcgag ggggg 495

<210> 170
<211> 433
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 367, 423
<223> n = A,T,C or G

<400> 170
cgcccgggca gggtacttgg attacaggcg tggaccagca tgccatgcct atagtgatat 60
ctttaagtaa ccctctcttt tcttcttttg agcaattttt caaagcaaca ggcattttat 120
taaataagaa agtcgatgtg ctttcctaat gcctgttaat aaagtaagga gccaaggaac 180
ctctgtgatt tcaatgaaat ccctccagat attataggct acttgttact gacaagtatg 240
gcaggaactg caggtcaagc tgtgataggc aaatagatct tgctgaagag gaagaatgat 300
tggctaagat aatgccccaa gacagctggc atacctttag acacagctaa attgaatgct 360
ttctgangag gagtgtatta agtctgtctc acactgatat aaagacatac ctgagaatgg 420
gtnattgaaa aaa 433

<210> 171
<211> 357
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 127
<223> n = A,T,C or G

<400> 171
ggtctcggtc actcgaataa cccgacatgg cgtcaatggt tgcggttggc ggggaacgaa 60
gtatatagaa aagcgtgcga caagtcgctg gaaatggcct cgatgacggc gaagccttgc 120
gggggcnggc agcggaggaa ggacaccgat gacaccagcc gaagctgcac tactagagac 180
cggtagaaat gaatgaggtc cccgcgtacc tcggccgccc gggcaggtac aatgcaaagt 240
ataggctttt gaactaaatt ggcctgggtt caaatatgag ccctctcaca ttctattagg 300
ttgaaccata taaaaatgga gatattcaat catttttta cagtttcacg tagttca 357

<210> 172
<211> 272
<212> DNA
<213> Homo sapiens

<400> 172
ccgggcaggt acctttggtt aagagtagac aaggcagaca tctgagcctg catgactcag 60
caagtttagg gtgcaggcac atactccact tgttgtataa cctgtttgtg taagctgata 120
cttgccttgg agccactatt gtctgtaaaa ggtataactg ccctgctgac actgtgcatg 180
ggggacatgg cttggcttgg ctcttgggca tggcttgaca tggctcttgc gctcatgccc 240
agagagagaa ggagataaac tgctgaccct ga 272

<210> 173
<211> 294
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 50, 57, 85, 88, 131, 179, 227, 241, 250
<223> n = A,T,C or G

<400> 173
ccgggcaggt acttggatna caggcgtgga ccagcatgcc atgcctatan tgatatnttt 60
aagtaaccct ctcttttctt ctttnganca atttttcaaa gcaacaggca ttttattaaa 120
taagaaagtc natgtgcttt cctaatgcct gttaataaag taaggagcca aggaacctnt 180
gtgatttcaa tgaaatccct ccagatatta taggctactt gttactngac aagtatggca 240
ngaactgcan gtcaagctgt gataggcaaa tagatcttgc tgaagaggaa gaat 294

<210> 174
<211> 389
<212> DNA
<213> Homo sapiens

<400> 174
ccgcggtggc ggccgcccgg gcaggtacaa gcagtaattg attcactggc cttggactac 60
ttgcaggtca gcttgtctca cataacaggt tggtatatgt ataactatca cataattatg 120
cattttagta aaaataattg tttagaactg gcttcgggca gttgtgacct ctaactgtaa 180
tttccttgct tcttctgtat gtttccacct cttgtgctgt gcgcctagcc aaatcagggt 240
gctcttgata aaaattcttc tcaaatttag gcagctcatc aagattccac ttctttttaa 300
ctaatttctc cccagggttt ccaaacttct ttccagataa gggccctgcc ctacttcctc 360

caaatcgagg tgcaccaaac cctcggtcc 389

<210> 175
<211> 428
<212> DNA
<213> Homo sapiens

<400> 175
cgcccggcag gtacgcgggg agagggagct gggcagggca cagcagggca ggagtgtgtt 60
tgatgtgtcc tgggaaccgc cctgaggccg tcgtgtggct ggagtgctgc aggtgtcaag 120
gaaattgtag gagatgtctc ctgagtgtga tggaatataa ccagatttcc agaaggaact 180
gacatgatct gacttaaaaa ggccacctac atttacatga aggccgccta cctcagcatg 240
tttgggaagg aggaccacaa gccgttcggg gacgacgaag tggaattatt tcgagctgtg 300
ccaggcctga agctcaagat tgctgggaaa tctctaccca cagagaagtt tgccatccgg 360
aagtcccggc gctacttctc ctccaaccct atctcgctgc cagtgcctgc tctggaaatg 420
atgtacct 428

<210> 176
<211> 422
<212> DNA
<213> Homo sapiens

<400> 176
ggggccattg agactgccat ggaagacttg aaaggtcacg tagctgagac ttctggagag 60
accattcaag gcttctggct cttgacaaag atagaccact ggaacaatga gaaggagaga 120
attctactgg tcacagacaa gactctcttg atctgcaaat acgacttcat catgctgagt 180
tgtgtgcagc tgcagcggat tcctctgagc gctgtctatc gcatctgcct gggcaagttc 240
accttccctg ggatgtccct ggacaagaga caaggagaag gccttaggat ctactggggg 300
agtccggagg agcagtctct tctgtcccgc tggaacccat ggtccactga agttccttat 360
gctactttca ctgagcatcc tatgaaatac accagtgaga aattccttga aatttgcaag 420
tt 422

<210> 177
<211> 540
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 491, 530
<223> n = A,T,C or G

<400> 177
gcggcccgag gtactgtcca actggatgct gccctggtgg ctgaaggcac acttcatgat 60
gctgtccagg gtcatcaggg agacatgttg aaagagctcc agacgtgagt tttgggcaat 120
gtgttcctcc catttgttca gcatcatccg aacactctca gacatcatgg tgatgaatat 180
tttcagaatg ctgatgttga agccaggttt cacaatctgg cggtgctttt tccatttaga 240
accatccagg gtcacaagtc ctcgaccaac ccaggattca aggattttgt ggctaacagc 300
acttttggga tcttgtcttt tcgggagaat cttggcatag tctgggtcat ggacactgaa 360
gaacatcgta aagggtccaa cccacaaggg aacagcacat gggtattttt ccatcagctt 420
atgatacacc tcaaactcct ttactgggta aaactccttg tggccataaa ccaagtgggc 480
agggggtgca ngaaaacagg tgcagggctc tgaacatcca tctcctcctn tggtacctgc 540

<210> 178
<211> 304
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 54, 68, 126, 127, 132, 137, 143, 145, 149, 151, 169, 176,
180, 181, 232, 259, 261, 263, 264, 266, 270, 273, 277, 288,
304
<223> n = A,T,C or G

<400> 178
aatnggagct cccccgcggt ggcggcccgg ccatggaggc tgatggggcc ggcnagcaca 60
tgagaccnct actcacccgg ggtcctgatg aagaagctgt tgtggatctt ggcaaaacta 120
gctacnntgt gnaaccnaag ttnanacana ngaacttgaa gagtcatana gctgtntatn 180
ntggagttca cgtcccgttt agtaaagaga gtcgtcggcg tcataggcat cngtgacaca 240
aacatcacca ccaaaacgna ngnnanatan ttnaaanaaa agtcctcngc cgctctagaa 300
ctan 304

<210> 179
<211> 332
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 28, 33, 43, 53, 70, 75, 81, 83, 84, 88, 97, 102, 119, 128,
135, 136, 140, 148
<223> n = A,T,C or G

<400> 179
ggagctcccc gcggtggcgg ccgacgtnca agnatctgtt gcntgcacat ctncgatagc 60
caacgcctgn ccatnattgg ncnnatanaa accctcntgc tncatgatac ctacaggana 120
aacacaanct cggtnngctn ttcgagtnct gaaaggtgtg aataagttac caccaccaag 180
tgtcatgata gaggaaatta atgcaaggaa agaaaacaag cccagttgtt ccgcttgact 240
ggcccaggaa aatgggaagg agccagaaat gccatcatga cccagtggga ccgaacattc 300
aaggtcatca aagctcgagt tgtacctgcc cg 332

<210> 180
<211> 662
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 493, 505, 507, 527, 540, 581, 592, 611, 618, 623, 625, 635,
638, 639, 640, 646, 662
<223> n = A,T,C or G

<400> 180
ccgcggtggc ggcccgaggt acccagggaa caaatgctac tgggactcca cacctaccta 60
agaagcagct ctacccagac tccacatggc tctctgtttt ggtctggaga ccccagctgg 120
ggtatctcct gagcccaggg attcaaaggt tcgtggcaga aatatgcatc ccacgggact 180
ctcactcact caccattttc ttgtaggggg attcccctgg gtctgtgcca ctcctgggtg 240
aatggttgat ctgtctcact cttctccgtg atccgaaggt cacactatgt cactgatgaa 300
tccttatgtg tccacctgga tgttccggtt gaagagctag tgtctcacca ctctttctgc 360
tatttgtgag aagtggcaca cactagctgc ttctagtcaa ccatcttggc cccacctcac 420
tcacttttct caagtaatca aagaccagaa aggatgtcct ttacaagaag cagatccccc 480
aaaatgtaag aantcacttg aaaangnggg gagctcaaac ccaaganaag gacttatctn 540
gcagcataaa aaacaacttg tacctgcccg ggccgggccg ntttagaact anaggatcc 600
cccgggctga nggaattnat ttnancttat tgatnccnnn gacctnaggg gggggcccgg 660
tn 662

<210> 181
<211> 413
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 81, 85, 89, 90, 104, 110, 112, 144, 145, 153, 158, 166, 174, 197, 200, 202, 207, 221, 222, 228, 229, 232, 235, 240, 250, 268, 279, 282, 285, 290, 291, 300, 307, 313, 314, 320, 321, 323, 330, 337, 339, 344, 350, 357, 366, 368, 370
<223> n = A,T,C or G

<221> misc_feature
<222> 383, 384, 386, 402
<223> n = A,T,C or G

<400> 181
aggtactttt tttttttttt tttttttcc ttttttttt ttttttttt ttttttttt 60
ttttttttt tttttttggg ncccnccann ctttgattgg cccncaacan tnttacaaac 120
aaaaggcatt aggcaaagca tgcnnaattg atnggagncc cttggncaaa ggtnttattg 180
attgacggca atcaaanccn cnccctnaaa aaggatttga nnaggccnnt tntgnccatn 240
tgcaaaaggn tccccaaaag gggcaaangg cggggcccng gnggnagggn nccatgggan 300
ttagggngac ccnnaaccan nantaccaan aggcctntna ggantgcaan gaaaaanagg 360
accctnancn ccatggttcc agnntnactg ccctgccccc gngtacctgc ccg 413

<210> 182
<211> 93
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 14, 16, 22, 26, 28, 30, 33, 42, 43, 44, 46, 50, 51, 58, 60, 68, 74, 84, 85
<223> n = A,T,C or G

<400> 182
cccccctggng aaanangggc anaacngntn ccnggggaaa annntntccn ntaaaatncn 60
caaaatanaa accnggaaca aaanngaaaa ccc 93

<210> 183
<211> 485
<212> DNA
<213> Homo sapiens

<400> 183
aggtacaaac ttagaagaaa attggaagat agaaacaaga tagaaaatga aaatattgtc 60
aagagtttca gatagaaaat gaaaaacaag ctaagacaag tattggagaa gtatagaaga 120
tagaaaaata taaagccaaa aattggataa aatagcactg aaaaaatgag gaaattattg 180
gttaccaata gaagggcaat gcttttagat taaaatgaag gtgacttaaa cagcttaaag 240
tttagtttaa aagttgtagg tgattaaaat aatttgaagg cgatctttta aaaagagatt 300
aaaccgaagg tgattaaaag accttgaaat ccatgacgca gggagaattg cgtcatttaa 360
agcctagtta acgcatttac taaacgcaga cgaaaatgga aagattaatt gggagtggta 420
ggatgaaaca atttggagaa gatagaagtt tgaagtggaa aactggaaga cagaagtacc 480
tcggc 485

<210> 184
<211> 547

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 430, 501, 538
<223> n = A,T,C or G

<400> 184
aggtacaagt tgtctttatg ctgcgagata agtcctctct tggtttgagc tcccaccttt 60
tcagtgaact cttacatttt gggggatctg ctcttgtaaa ggacatcctt tctggtcttt 120
gattacttga gaaaagtgag tgaggtgggg ccaagatggt tgactagaag cagctagtgt 180
gtgccactct cacaaatagc agaaagagtg gtgagacact agctcttcaa ccggaacatc 240
caggtggaca cataaggatt catcagtgac atagtgtgac cttcggatca cggagaagag 300
tgagacagat cagccattca cccaggagtg gcacagaccc gggggaatcc ccctacaaga 360
aaatggtgag tgagtgagag tcccgtggga tgcatatttc tgccacgaac ctttgaatcc 420
ctgggctcan gagataccc agctggggtc tccagaccaa aacagagagc catgtggagt 480
ctgggtagag ctgcttctta ngtaggtgtg gagtcccagt agcatttgtt ccctgggnac 540
ctgcccg 547

<210> 185
<211> 42
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2, 4, 17, 25, 31
<223> n = A,T,C or G

<400> 185
nnanatcaag cttatcnatc ccgcnacctc nagggggggc cc 42

<210> 186
<211> 367
<212> DNA
<213> Homo sapiens

<400> 186
aggtacgcgg gagattatga aaatcgcgag tcaacaccca aactggcaaa attactgaaa 60
ctactacttt gggctcagaa cgagctggac cagaagaaag taaaatatcc caaaatgaca 120
gacctcagca agggtgtgat tgaggagccc aagtagcgcc tgcgcttgcg tggtggatcc 180
aacaccaacc ctgcgtcgtg ggacttgcct cagatcagcc tgcgactgca agattcttac 240
tgcagtagag aactcttttt ctcccttgta cgcgggacct ggacgaaggc ttgtcctaca 300
cgagcatctt ctatccggtt gaagtttttg agagttcgct ttcagatcct gggcccggaa 360
agcaaga 367

<210> 187
<211> 317
<212> DNA
<213> Homo sapiens

<400> 187
ggtctcggtc actcgaataa cccgacatgg cgtcaatggt tgcggttggc ggggaacgaa 60
gtatatagaa aagcgtgcga caagtcgctg gaaatggcct cgatgacggc gaagccttgc 120
gggggcggca gcggaggaag gacaccgatg acaccagccg aagctgcact actagagacc 180
ggtagaaatg aatgaggtcc cccgcgtacc tcggccgccc gggcaggtac gcgggggcca 240
gcgtcaccag accagctgcg ggacaaacca ctcagactgc ttgtaggaca aatacttctg 300
acattttcgt ttaagca 317

<210> 188
<211> 299
<212> DNA
<213> Homo sapiens

<400> 188
aggtactagc agtaattgat tcactggcct tggactactt gcaggtcagc ttgtctcaca 60
taacaggttg gtatatgtat aactatcaca taattatgca ttttagtaaa aataattgtt 120
tagaactggc ttcgggcagt tgtgacctct aactgtaatt tccttgcttc ttctgtatgt 180
ttccacctct tgtgctgtgc gcctagccaa atcagggtgc tcttgataaa aattcttctc 240
aaatttaggc agctcatcaa gattccactt ctttttaact aaatttctcc ccagggttt 299

<210> 189
<211> 279
<212> DNA
<213> Homo sapiens

<400> 189
ccgggcaggt acatttcctg agcaggtgat cctggctgtc tgtcctggag acactgacac 60
tgaagatggc tgtgtcagct cataggaggc cacagagact gtgcagagaa tgaggagggg 120
gagcaggaga gggatccagg ccatggtgag acattcagag ctctgcctcc tgagcctaca 180
gcccccgcgt acctcggccg cccgggcagg tactttaata gctcaaactc agagtcatcg 240
tgctcccaat tccaaagaga ttcctaaaag aggcaactt 279

<210> 190
<211> 630
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 547, 575, 592, 607, 612, 613
<223> n = A,T,C or G

<400> 190
ccgggcaggt accttctggg gcatacaaca tggcagcagg gcctcgggaa gaggggtagg 60
aggaccgagc agcattctct gtagaggaag acaggaaagg agaccctctt ggcacacatt 120
tatggagggt tgtccctgaa gagaagggca ggtgggagag gttccctgtt acttaagaga 180
aggcaccagt ggcaaagagc acaatgaaga ggatgatgat aaaaacaatc acgcagataa 240
ggacaatcat cttcacgttc ttccaccaga attttcgagc caccttctgc gatgtcgtct 300
tgaagtgctc agatgtggct tccagatcct ctgtcttgtt gcggagatgt tccaagtttt 360
ccccccgggc caggatccgc tccacattct gggtcataat attcttaact ccctccacct 420
cactttgcag gttccgcaca cgatcatttc ctccaccttc actggcttcc tccatgtctc 480
aaaacaagtc caagccggtc agtaaagtga attcgcctag tcggctttcc tccaaggtgg 540
ccctcanttc acttcctgct tgcttcaact tttancctgc ccccgccccc gngtaccttt 600
gggccgnttt annaactagt ggatcccccg 630

<210> 191
<211> 667
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 528, 538, 548, 582, 600, 655, 656, 666
<223> n = A,T,C or G

<400> 191

cgcacagtaa cagtaatagt cagcctcatc ctcaacgtgg gccccactga tggtcaaggt 60
gactgtggtc cgtgaactgg agccggagaa tcgctcagag atccctgagg gccgctcgct 120
gtctttatac atcactaaca caggggcctg gcctggcttc tgctggaacc accgagcatc 180
tttttttgcc agtacctcgg ccgggaccga gggtttggtg cacctcgatt tggaggaagt 240
agggcagggc ccttatctgg aaagaagttt ggaaaccctg gggagaaatt agttaaaaag 300
aagtggaatc ttgatgagct gcctaaattt gagaagaatt tttatcaaga gcaccctgat 360
ttggctaggc gcacagcaca agaggtggaa acatacagaa gaagcaagga aattacaagt 420
tagaggtcac aactgcccga accagttcta aacaattatt tttactaaaa tgcataatta 480
tgtgatagtt atacatatac caacctgtta tgtgagaaca aagctganct gcaagtantt 540
ccaaggcnag tgaattaatt actggttgta ccctcgggcc gntctagaac taattggatn 600
cccccggctt gcaaggaatt cgatattaaa gcttattcga ataccggcca acctnnaagg 660
gggggnc 667

<210> 192
<211> 274
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 25, 47
<223> n = A,T,C or G

<400> 192
cncggtggcg gcccgaggta ctgtntaact ggatgctgcc ctggttnctg aaggcacttt 60
tcatgatgct gtccagggtc atcagggaga catgttgaaa gagctccaga cgtgagtttt 120
gggcaatgtg ttcctcccat ttgttcagca tcatccgaac actcttagac atcatggtga 180
tgaatatttt cagaatgctg atgttgaagc caggtttcac aatctggcgg tgcttttttcc 240
atttagaacc atccagggtc acaagtcctc gacc 274

<210> 193
<211> 259
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 82, 83
<223> n = A,T,C or G

<400> 193
ggcgaattgg agttccccgc ggtggcggcc gaggtactct gcgttgttac cacaggcgat 60
gacagctcca tgtgtgttat tnncccctgaa gaccttccag agacaaaatg tggaggtgga 120
agacagtgat actgatgacc ctgaccctgt gtggatctag gctaacatgt gtttttgtgt 180
cttagttttc aacaaaaaag tttaaaaagt taaaatacta agtttataaa gttaaaaagt 240
taccccgcgt acctgcccg 259

<210> 194
<211> 261
<212> DNA
<213> Homo sapiens

<400> 194
agggcgaatt ggagctcccc gcggtggcgg ccgaggtact ctgcgttgtt accacaggcg 60
atgacagctc catgtgtgtt attgcccctg aagaccttcc agagacaaaa tgtggaggtg 120
gaagacagtg atactgatga ccctgaccct gtgtggatct aggctaacat gtgtttttgt 180
gtcttagttt tcaacaaaaa agtttaaaaa gttaaaatac taagtttata aagttaaaaa 240
gttaccccgc gtacctgccc g 261

<210> 195
<211> 322
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 12, 16
<223> n = A,T,C or G

<400> 195
cggcgaattg gntttncaca cgcggtggcg gcccgaggta ccaaggagaa gacttgaacc 60
aaaaacaaac tcttcaagta tattcattca ttcaacaaaa tttttgcatg ccttctatgt 120
cgtaggcatt tttagttcct ggggatttgg acatggctaa gtcagagaag gccattgctc 180
accatgaaca ctgtatacca gaaggagagt ggggaggaga caaaaaacaa ataagaccac 240
ttcagacaat caaagtatca gttaagagaa tgaaaacagg cctgactcag tggctcacgc 300
ctgtaatccc agtacctgcc cg 322

<210> 196
<211> 464
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 442
<223> n = A,T,C or G

<400> 196
cgcggtggcg gcccgcccgg gcaggtacaa ggcaaatact gctttatttt tccttcagct 60
tttctcaagc agaagaagtc tctcactata gccaccacag ctggcaatat gctgggtctc 120
acctggagcc ggaaagtctc agagtctcac ccaaggccca tggtatacta cttggatatt 180
gctgctggtt attcaaggcc caagggatct ttagtcagca ggtgacgtat tccgcaagga 240
ctgggtcctt tccttcatgg cagcaggttc ccttctggcc cagggtgttt ctaaaaatgg 300
tttctgggag ctaggaatcc ccactcatca aagaggactt caatgcaaga caaagtcctc 360
tttactcttc tccctcctct cccaagagga aggaagggtc tcttttggaa gtcaggagct 420
gcattccctg ggttggggga angggtagta ccttggccgc tcta 464

<210> 197
<211> 376
<212> DNA
<213> Homo sapiens

<400> 197
cgcccgggca ggtacaagca gtaattgatt cactggcctt ggactacttg caggtcagct 60
tgtctcacat aacaggttgg tatatgtata actatcacat aattatgcat tttagtaaaa 120
ataattgttt agaactggct tcgggcagtt gtgacctcta actgtaattt ccttgcttct 180
tctgtatgtt tccacctctt gtgctgtgcg cctagccaaa tcagggtgct cttgataaaa 240
attcttctca aatttaggca gctcatcaag attccacttc tttttaacta atttctcccc 300
agggtttcca aacttctttc cagataaggg ccctgcccta cttcctccaa atcgaggtgc 360
accaaaccct cggtcc 376

<210> 198
<211> 441
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 258, 371, 375, 404, 432
<223> n = A,T,C or G

<400> 198
ttaatacgac tactataggg ttaattggag ctccccgcgg tggcggccga ggtacttgtt 60
gttgctttgt ttggagggtg tggtggtctc cactcccgcc ttgacggggc tgctatctgc 120
cttccaggcc actgtcacgg ctcccgggta gaagtcactt atgagacaca ccagtgtggc 180
cttgttggct tgaaagctcc ttcagaagga ggggtgggaa cagagttgac ccgagggggc 240
agccttgggc tgacctanga cggtcagctt ggtccctccg ccgaacaccc aagtgctacc 300
atctccatat gagcagcagt aataatcagc ctcgtcttca gcctggagcc catagattgt 360
cagggtaggc ncgtngttgc caggactttg gagccaagag aagncgaatt aagaaaaccc 420
cttgaagggg cncgcttact t 441

<210> 199
<211> 255
<212> DNA
<213> Homo sapiens

<400> 199
ccgcggtggc ggccgaggta cctacgctat caggaggccc tgagtgagct ggccactgcg 60
gttaaagcac gaattgggag ctctcagcga catcaccagt cagcagccaa agacctaact 120
cagtcccctg aggtctcccc aacaaccatc caggtgacat acctcccctc cagtcagaag 180
agtaaacgtg ccaagcactt ccttgaattg aagagcttta aggataacta taacacattg 240
gagagtacct gcccg 255

<210> 200
<211> 60
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24
<223> n = A,T,C or G

<400> 200
gcttttgttt ccctttaagt gagnggttaa attgccgccg cttgggcgtt aatcatgggt 60

<210> 201
<211> 210
<212> DNA
<213> Homo sapiens

<400> 201
gctgttatgc tcatcatggc acttaagaga tgcttaacaa acctttccta caatgttcct 60
cagattttca gagcttattt gatctagcat ctggttccta aattctgagt cacatcagaa 120
gccaaacttg aatgcttttg gaaagagcta gcctcatacc acttcaagtt ggggaagggg 180
gagtacctcg gcccgctcta gaaactagtg 210

<210> 202
<211> 93
<212> DNA
<213> Homo sapiens

<400> 202
cgcttggccg taatcatggt catagcctgt ttcctgtgtg gaaattgtta tccgcttcac 60
aatttccacc accaaccata acgaagcccg ggg 93

<210> 203
<211> 215
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 173, 174, 177, 185
<223> n = A,T,C or G

<400> 203
ccgcggtggc ggccgcccgg gcaggtactt tttttgtgat ttttgaatgc acgtgcgcag 60
gaagggctcc tcttagagaa gcagtcaaac tgtgaagcac taagctgacc ctgcttcaag 120
caattttgtt tttacaactg ttcctttcac aagcaagcct taaaaaaaaa aannaantaa 180
aaaanaaagt acctcggccc gctctagaac tagtg 215

<210> 204
<211> 72
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 55
<223> n = A,T,C or G

<400> 204
agctgtttcc tgtgttgaaa ttgttattcc cgctcnccaa tttccacaca aacantaccg 60
aagcccgggg ag 72

<210> 205
<211> 254
<212> DNA
<213> Homo sapiens

<400> 205
acactactta gggcgaattg gagctccccg cggtggcggc cgcggtctcg gtcactcgaa 60
taacccgaca tggcgtcaat ggttgcggtt ggcggggaac gaagtatata gaaaagcgtg 120
cgacaagtcg ctggaaatgg cctcgatgac ggcgaagcct tgcgggggcg gcagcggagg 180
aaggacaccg atgacaccag cccgaagctg cactactaga gaccggtaga aatgaatgag 240
gcccccgcgt acct 254

<210> 206
<211> 55
<212> DNA
<213> Homo sapiens

<400> 206
cttggccgtt aatcatgggt cattaggctg ttttcctgtg gtgaaaattg ttatc 55

<210> 207
<211> 182
<212> DNA
<213> Homo sapiens

<400> 207
aggtgcagaa aactctcctc atctggaccc gtgacgtcct tgcagcccga gttggccata 60
tcccactacg cccctgcact ggagcctgaa gcaaagtgta aggaacggcc agagagcgca 120
acactggggc ccactacccc ggcgcaagtg acccgccgcc cccgcgtacc tgcccgggcg 180

gc 182

<210> 208
<211> 67
<212> DNA
<213> Homo sapiens

<400> 208
gctgtttcct gtgtgaaaat tggttatccg ctcacaattt ccacacaaca ttacgaagcc 60
gggggag 67

<210> 209
<211> 262
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 64, 237
<223> n = A,T,C or G

<400> 209
gctnattgga gctccccgcg gtggcggccg aggtacgcgg gggagtcctt ggagcgctgt 60
gttntttacc gtggtggtga ctggatccag gaggtcgaga gtcgttcttc tctttgcaca 120
gacgtgactc tgcagctctt taacggcgcc cgctgctctc aacccagctt accccacgtg 180
gtcccatggc ggcggccgct ctagaactaa gtggatcccc cgggctgcaa ggaaatncta 240
tatcaagctt atcgataccg ta 262

<210> 210
<211> 423
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 417
<223> n = A,T,C or G

<400> 210
ccgcggtggc ggccgaggta cccttattcg cctctttgac acacaatcca aggagaaact 60
ggtggagctg cgccgaggca ctgaccctgc caccctctac tgcattaact tcagccacga 120
ctcctccttc ctctgcgctt ccagtgataa gggtacctgc ccgggcggcc gcggtctcgg 180
tcactcgaat aacccgacat ggtgtcaatg gttgcggttg gcggggaacg aagtatatag 240
aaaagcgtgc gacaagtcgc tggaaatggc ctcgatgacg gcgaagcctt gcgggggcgg 300
cagcggagga aggacaccga tgacaccagc cgaagctgca ctactagaga ccggttagaa 360
atgaatgagg tccccgcgta cctcggccgc tctaggaact agtggatccc ccgggcntgc 420
agg 423

<210> 211
<211> 450
<212> DNA
<213> Homo sapiens

<400> 211
gggcgaattg gagctccccg cggtggcggc cgcccgggca ggtacaaagc agactgcccg 60
caaatcgacc ggtggtaaag cacccaggaa gcaactggct acaaaagccg ctcgcaagag 120
tgcgccctct actggagggg tgaagaaacc tcatcgttac aggcctggta ctgggaaaag 180
atctaatctg ccgtgggcct gtcgtgccag tcctgggggc gagatcgggg tagaaatgca 240
ttttattctt taagttcacg taagatacaa gtttcaggca gggtctgaag gactggattg 300

gccaaacatc agacctgtct tccaaggagg ccaagtcctg gctacatccc agcctgtggt 360
tacagtgcag acaggccatg tgagccaccg ctgccagcac agagcgtcct tccccctgta 420
gactagtgcc gtagggagta cctcggccgc 450

<210> 212
<211> 370
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 84, 167, 170, 175, 187, 196, 224, 238, 240, 245, 251, 274,
277, 318, 322, 341
<223> n = A,T,C or G

<400> 212
acttagggcg aattggagct ccccgcggtg gcggccgagg tacccacagc tgggagagag 60
ctagtgagct ccagggaggg tcanctgggg gagtttcacc attggctgtg tcagccaatg 120
gcaaggtgtg tgaacaggga actcctgtgt tgagcataga gaggaanaan atgcntccga 180
gatgganttg gggaangcaa gcacttgccg tgtttgtgtg tccngagact cgggctgntn 240
atgangagca ngagggagcg tatgaagata tcanatntgc aaaggacaaa acccccaccc 300
aattacagga ccactgancc tntagctatg gaagtcttaa ntacagattg cctgggccgg 360
gtggattttc 370

<210> 213
<211> 432
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 359
<223> n = A,T,C or G

<400> 213
tccttagggc gaattggagc tccccgcggt ggcggccgag gtacaccagc gaattcatac 60
aggtgagaga ccttatatat gcaatgaatg tggaaaaggc ttcattcaga agacgtgtct 120
catagcacat cagagatttc acacaggaaa gacgcccttt gtgtgcagtg aatgtggaaa 180
atcctgttct cagaaaatca ggtctcatta aacatcaaag aattcacaca ggagagaaac 240
cctttgaatg tagtgaatgt gggaaagcct ttagcacaaa gcaaaagccc attgtccatc 300
aaaggactca tacaggagag agaccctatg gctgtaacga gtgtgggaaa gcgtttgcng 360
tatatgtcgt gtctggttaa gcataagaga atacacacaa gggagaaaca agaggcagcc 420
aaggtggaaa at 432

<210> 214
<211> 330
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 136, 137
<223> n = A,T,C or G

<400> 214
ccagcagaag ccaggccagg cccctgtgtt agtgatgtat aaagacagcg agcggccctc 60
agggatctct gagcgattct ccggctccag ttcacggacc acagtcacct tgaccatcag 120
tggggcccac gttgannatg aggctgacta ttactgttac tgtgcggccg cccgggcagg 180
tacgcgggga gtcgggccgc gccgcgcctc agctctggtt gatgataatt agaagcatgc 240

tttccactga acttcccgac aacatttgtt atgcagaatg tctctgagtg agaactcggt 300
ttttgcctat gaatcttctg tgcatagcac 330

<210> 215
<211> 172
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 109, 147, 172
<223> n = A,T,C or G

<400> 215
ancaactaac cgctccgtga actccacatc gttctcaaat tctgggaagt gttccatctc 60
aattccaacc atgaggtacc tgcccggacc tgcccgggcg gccgctctng aaactagtag 120
gatcccccg gggcttgcat ggaattngat atcaaagctt tatccgatac cn 172

<210> 216
<211> 460
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 337, 347, 374, 406, 417, 435
<223> n = A,T,C or G

<400> 216
aggtacttgt tgttgctttg tttggagggt gtggtggtct ccactcccgc cttgacgggg 60
ctgctatctg ccttccaggc cactgtcacg gctcccgggt agaagtcact tatgagacac 120
accagtgtgg ccttgttggc ttgaagctcc tcagaggagg gcgggaacag agtgaccgag 180
ggggcagcct tgggctgacc taggacggtc agttttggtc cctccgccga acacccaaat 240
gccattactc gagccggccg cccgggcagg taccgcgggc tggtgacctc agccaagaat 300
gaattcaggc catccggcta caaggccaaa agctttnccc agcttancta ctttgaacca 360
ccctgctttc tggntttttc tggtttccac ttgcaaaaat tgggangggt gttttgntcc 420
tttttccctt gggcnttcca aacaattcaa attttaaaaa 460

<210> 217
<211> 261
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 239, 255
<223> n = A,T,C or G

<400> 217
ggcgaattgg agctccactc gcggtggcgg ccgaggtact gtccaactgg atgctgccct 60
ggtggctgaa ggcacacttc atgatgctgt ccagggtcat cagggagaca tgttgaaaga 120
gctccagacg tgagttttgg gcaatgtgtt cctcccattt gttcagcatc atccgaacac 180
tctcagacat catggtgatg aatattttca gaatgctgat gttgaaagcc aagggtttna 240
caatctggcg ggtgnttttt t 261

<210> 218
<211> 398
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 234, 253, 281, 311, 367
<223> n = A,T,C or G

<400> 218
ggcgaattgg agctccccgc ggtggcggcc gcccgggcaa ggtacattct tctcagcacc 60
ttagagccca ctgatgcagg catactggga acgactaagg actcacccaa gctgggtctg 120
ctcatggtgc ttcttagtat catcttcatg aatggaaatc ggccagtgag gctgtcatct 180
gggaggtgct gcgcaagttg ggctgcgcc ctgggataca tcattcactc tttnggggac 240
gtgaagaagc tcntcactga tgagttttgt gaagcaagaa nttaccctcg ggccgctcta 300
gaaactaagt nggatccccc ggggctgcag gaattcgata ttcaaggcct tatcggatta 360
ccgtctnacc ctcgaagggg ggggggcccc gggtaccc 398

<210> 219
<211> 380
<212> DNA
<213> Homo sapiens

<400> 219
aggtacagga cacaatgccc ccagaaaagt aacagccgtc atttatgcta gaaaaggaag 60
tgtcctccag agcatagaga aaataagttc ctctgttgat gcaacaactg ttacttcaca 120
acagtgtgtt tttagagacc aagaaccaaa gatccataat gagatggcat caacatcaga 180
taaaggtgcc caaggaagaa atgacaagaa agattctcaa ggaagaagta ataaggcatt 240
acatctgaag agtgatgctg aatttaaaaa gatatttggc cttactaagg atttgagagt 300
gtgccttact cgaattcctg accatttgac ctctggagaa ggtttcgatt cctttagcag 360
tttggtaaag agcggtacct 380

<210> 220
<211> 195
<212> DNA
<213> Homo sapiens

<400> 220
cgaggtacac aagctcctgc atcagtgcag gactcagtcc ctgagtgctg ggcctgtcac 60
agacatcgcc ttctttactc ccacgcagcc aggttgacaa tcacagaccc tttctacagg 120
gaacctaaga caccaattta acctggccag gctgagctag tgggtcacaa gcttgaaatc 180
tgaggtacct gcccg 195

<210> 221
<211> 286
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 67, 70, 265
<223> n = A,T,C or G

<400> 221
aggtaccaat gtcttggggg gagggagcca gctgattgtg agatgtaagt ttgtgattct 60
gagatancan ctttgcaaaa aactgcaatt tgtcaattca ccaatattga taatgtgcaa 120
gcttggtgag ctgagaatat tcctgaaaac ctttgttccc actgcgaatt cctggggaca 180
gttatgagtt cctaatgacg tcaccacaaa gacattttgg agtgtttggt aaaggctgtt 240
tcttttcagt gattgctgga agcanatggg atcaaataaa aataga 286

<210> 222
<211> 372

<212> DNA
<213> Homo sapiens

<400> 222
aggtacagag tggaccatct tatgaggcca aaaacccatg agttaccaga tgaccattca 60
gatatttggg ttaaacgatg acagttttct ggtttaatca aggcacttgc aaagagctat 120
ctttgacatg acatgaagtc cctacgtgtt gttagccatt aatgatggca tggtttttct 180
ataccaagca ttctataaca agaacccaag cctgacagtt tgatcacaaa gtcacttata 240
acccgcgtac ctgcccgggc ggccgcccgg gcaggtacgc gggggccagc caagatggtt 300
gcccccgcag tgaaggttgc ccgaggatgg tcgggcctgg cgttgggcgt gcggcgggct 360
gtcttgcagc tt 372

<210> 223
<211> 134
<212> DNA
<213> Homo sapiens

<400> 223
actatagggc gaattggagc tcaccgcggt ggcggccggg cccgtggagg cctaggctgg 60
ccctaggacc ttcttggttt gctccttgga ttccccttcc cactccagca ccccagccag 120
cctggtacct cggc 134

<210> 224
<211> 252
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 40, 81, 83, 101, 128, 139, 140, 156, 163, 167, 169, 200, 208, 209, 211, 218
<223> n = A,T,C or G

<400> 224
tagggcnaat tggagctccc cgcggtggcg gccgcccggn caggtaccaa aaaacatatt 60
ggtttggcaa tgcatctcca nancaggtga tcctggccgt ntgtcctggg gacactgaca 120
ccgagggngg ctgtatcann tcataagagg cctcanagcc tgngcanana gtgaggatgg 180
ggagaagtac agggatccan gccatggnna nacacccnga gttctgcctc ctggacccac 240
ccccgcgtac ct 252

<210> 225
<211> 44
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17
<223> n = A,T,C or G

<400> 225
acctcgaggg ggggccnggt cccagctttt gttcccttta atga 44

<210> 226
<211> 235
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 226
naattggagc tccccgcggt ggcggcccgc ccgggcaggt acgcggggac accaaacaac 60
tcattacaca aagaggtaag gtcccagacc acgccaaagc ttcctgagac ctctcctcat 120
ctgtgcatgg acggatgacc aactctgggg cccaggctgt tgcttcccag tataatgatg 180
aatccgccat agtctggtga gtgtagaggc tgactctgga gcccaggctg tacct 235

<210> 227
<211> 319
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 264, 274
<223> n = A,T,C or G

<400> 227
ggagctcccc gcggtggcgg cccgcccggg caggtacttg gattacaggc gtggaccagc 60
atgccatgcc tatagtgata tctttaagta accctctctt ttcttctttt gagcaatttt 120
tcaaagcaac aggcatttta ttaaataaga aagtcgatgt gctttcctaa tgcctgttaa 180
taaagtaagg agccaaggaa cctctgtgat ttcaatgaaa tccctccaga tattataggc 240
tacttgttac tgacaagtat ggcnggaact gcangtcaag ctgtgatagg caaatagatc 300
ttgctgaaga ggaagaatg 319

<210> 228
<211> 179
<212> DNA
<213> Homo sapiens

<400> 228
gggcgaattg gagctccccg cggtggcggc cgcccgggca ggtacgcggg gccaggcgga 60
agcccggctc cgggccagca tccgagagcc cggactggag agtcaacttt tataacactg 120
ttactgggaa tacttgactt actaagcttt tactgaacac tttaattttg ggagtacct 179

<210> 229
<211> 602
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 245, 253, 283, 315, 345, 382, 403, 404, 408, 422, 423,
431, 439, 448, 455, 483, 511, 533, 544, 549, 555, 565, 574,
580, 587
<223> n = A,T,C or G

<400> 229
aggtaccgct ttgtangggga aggaggagta aggatgtcgg agacctgtgt ccaggtgcac 60
cgatgccaga cagacgctcc catgtggctg aatgggaccc accctgccct tggggatggc 120
atcaccaacc acactgcctg tgcccattgg agtggcaact gctgtttctg gaaaacagag 180
gtgctggtga aggcctgccc aggcgggtac ctgcccgggc ggccgcccgg caggtactgt 240
ttctnaacct ganctgcata ttggaatcac ctggggagct ttnacaacta catgattcct 300
aggacccatc tccanaaagt ccaaaataat tgctctgggt gcaanctgga ctgtgggatt 360
tttaatccct tccctccctg anattctaat gtgcaaccag tgnnaagnaa catcatcctg 420
tnnaccgttt nccaaacang tgtggatntg ggcanacagg cttgtcaaaa tgccttttcc 480

canatccatc ccaagacaac aaattcatta nttttggggc aacttccaaa atnttacttt 540
tttntcaant ccaancccca ttttnatttt tatngaagan ggcgttntaa caaatttaaa 600
aa 602

<210> 230
<211> 202
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 144, 145, 152, 154, 155, 156, 164, 167
<223> n = A,T,C or G

<400> 230
ccgggcaggt actttgagca aggtccgcaa gcaggatgcc tgcacttctc cagtcatgct 60
ccagcaccag gtcggaagct gtctacatgc ggggatggac cctggcatcc tgggctcaca 120
aggatagggc cctgaatatg ggcnnagccg ancnnncttg aganggnagc tgcacccacc 180
ctgagtgcct cccgtggtac ct 202

<210> 231
<211> 194
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 25, 36, 40, 41, 68, 70, 98, 103, 104, 106, 115, 136
<223> n = A,T,C or G

<400> 231
ccgggcaggt acncgggggc tgtangctca agaggnacan ntctgaatgt ctcaccatgg 60
cctggatncn tctcctgctc cccctcctaa ttctatgnac agnntntgtg gcctnctatg 120
agctgacaca gccatnctca gtgtcagtgt ctccggtaga gacagccagg atcacctgct 180
caggaaatgt acct 194

<210> 232
<211> 271
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 34, 89, 147, 148, 160, 164, 167, 187, 192, 214, 220, 221,
223, 224, 234, 235, 240, 241, 242, 246, 247, 260, 264
<223> n = A,T,C or G

<400> 232
gattntgaaa atattcatca ccatgatgtc tganagtgtt cggatgatgc tgaacaaatg 60
ggaggaacac attgcccaaa actcacgtnt ggagctcttt caacatgtct ccctgatgac 120
cctggacagc atcatgaatg tgccttnncc accagggcan catncanttg gacagtacct 180
tggccgntct anaactatgg atcccccggc tgangaattn nanntcaact tatnnatccn 240
nnactnnagg ggggcccggn cccnactttt g 271

<210> 233
<211> 239
<212> DNA
<213> Homo sapiens

<400> 233
ttggagctcc ccgcggtggc ggccggccat ggaggctgat ggggccggcg agcagatgag 60
accgctactc acccggggtc ctgatgaaga agctgttgtg gatcttggca aaactagctc 120
aactgtgaac accaagtttg aaaaagaaga actagaaagt catagagctg tatatattgg 180
tgttcacgtc ccgtttagta aagagagtcg ccggcgtcat aggcatcgcg gacacaaac 239

<210> 234
<211> 582
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 206, 340, 408, 419, 425, 427, 452, 459, 464, 466, 474, 476,
480, 512, 517, 530, 537, 542, 548, 554, 555, 558, 560, 562,
563, 566, 567, 568, 569
<223> n = A,T,C or G

<400> 234
gattggagct ccccgcggtg gcggccgagg tacgcgggga tggctggcca gaggaggaac 60
gctttgtgtt ctcatcggag ctgcatggga agtctgcata cagcaaagtg acctgcatgc 120
ctcaccttat ggaaaggatg gtgggctctg gcctcctgtg gctggccttg gtctcctgca 180
ttctgaccca ggcatctgca gtgcancgag gttatggaaa ccccattgaa gccagttcgt 240
atgggctgga cctgaactgc ggagctcctg gcaccccaga ggctcatgtc tgttttgacc 300
cctgtcagaa ttacaccctc ctggatgaac ccttccgaan cacagagaac tcagcagggt 360
cccaggggta cgataaaaac atgagcggct ggtacctgcc cgggcggncg cccgggcang 420
tactnangtg taaagggatt tatatgggga cnttggccna tttncnggtg ttgncngttn 480
ctctttttaa gcttatactc atgaatcttg tnttaanctt ttgaaggcan actgccnaaa 540
tnctgganaa atannagntn gnnaannnng ggggtttttt tt 582

<210> 235
<211> 158
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 134
<223> n = A,T,C or G

<400> 235
ggtggcggcc gcccgggcag gtacctcaga agcaaaccca gttcctgcac acagaaaccc 60
cattcaggct cctactgcac tgagaagcac gtgttctcca tttccctggg ggagaccatt 120
gtattgggca gttnggaaca aaacaccatg gactggga 158

<210> 236
<211> 147
<212> DNA
<213> Homo sapiens

<400> 236
ttagggcgaa ttggagctcc ccgcggtggc ggccgcacaa aaaccaatct acctgatgaa 60
aactccgttc ccttctcgcc agaaacataa aatgcgatgg agctacggcc accgctgccg 120
agacaaaatg gcgccccccg cgtacct 147

<210> 237
<211> 763
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 25, 27, 28, 29, 36, 78, 99, 145, 177, 204, 205, 231, 233, 235, 236, 253, 259, 262, 289, 299, 346, 352, 369, 370, 371, 385, 448, 514, 539, 544, 546, 551, 554, 555, 556, 558, 578, 696, 719, 750, 753
<223> n = A,T,C or G

<400> 237
tggagctccc cgcggtggcg gccgncnnnc cgggtnctca ccaaaattgg gcctgagaaa 60
tttgttatat cctgctgnga ggttctcaaa gccaggcang gaaagcttgt cacttctgcc 120
gacctcgacg ttgaactgac tcctntggat gcacatcctc tcagtgaaga gactcanaca 180
cacgaaggcc aagtggaggc tgcnnttcat gttgagaagc tgctcacacc nangnnctga 240
agtaagaatc acnatgtant tnttgaggct ctgttagggc aagtccttna ggcctacang 300
caagacttcc aggcaaggca cggtcttctg ggtccccagg gttctnctca tnctcagccc 360
tgtcccctnn natgtggaca cgcanccacc ctcagatgga gtggctctct gggaaagaat 420
ggagctgcta aacctgtctt ggctccancc atgcaggtaa ggggagggat tgcttggacg 480
cttggccttg caccctgagg gagctgggag ccangaggga ctcatatgga agggcagana 540
aaananctta ntgnnngnta cctgccccgg gccggccntg aaccatttac tgtcggtgta 600
tttaaactgc acttggtaga caacaagcct cgtgctattg ctcaaggcca ctgcttccaa 660
ctcaggacct gctctgcttt gacctcggcc ctctanaact atggatcccc cggctgcang 720
aattcattca acttatcgat tccgtcgacn tcnagggggg gcc 763

<210> 238
<211> 723
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 347, 349, 385, 504, 552, 569, 578, 585, 648, 678, 694, 697, 705, 707
<223> n = A,T,C or G

<400> 238
tcactatagg gcgaattggg gagctccacc gcggtgggcg gcccgaggta cagcacccgc 60
ttggctgtgc tgagcagcag cctgacccat tggaagaagc tgccaccgct gccgtctctt 120
accagccagc cccaccaagt gctggccagt gagcccatcc cgttctctga tttgcagcag 180
gtctccagga tagctgctta tgcctacagt gcactttctc agatccgtgt ggacgcaaaa 240
gaggagctgg ttgtcgacca gacactattt cagctaaaac cccagctcga agaccaaaga 300
agtgggttgg cttgtctctg acaagtcacg cttttgattc ttttacngnc tttgtgggac 360
acaaagatgg gtggagatgg ctcanaagtt gggagctgct ctccaggttg gggaggcact 420
ggtctggacc aaaccagtta aagatcccaa atcaaaacac cagaccactt taaccaagca 480
aacctgccag tttccagcaa cctntgggct ctaatcaaag cttctaggac aggcaatgtc 540
tttagcagct gnatacaagg acgcttccnt taagtagnaa ccatncaaga gcttccatga 600
aagaccttgg caaggtaccc tgcccgggcc gggcggttct aaaaactngt ggattccccc 660
ggggccggaa ggaattcnat ttaaaagctt attnganacc cgccnancct tgaagggggg 720
ggg 723

<210> 239
<211> 305
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 109
<223> n = A,T,C or G

<400> 239
cgcggtggcg gccgaggtac aggaggcccg acaatttggt gaccaagtga tggcaggcca 60
ctcagctttg agtagccatg tccgccacag gccctgcggc acatctcanc tccctgggtg 120
cagaattctg acatcatggc cttcatgccc gtgctcagtg cgtggagctg tgagaacatg 180
gagggggggtt gggcggtgtt agggggcctc caccataggg gaccaaccct gtgcaccact 240
tactgagcat ctactcatgc ccagctcaac tctgaggtcc cgcgtcctgc cgggcggccg 300
ctcta 305

<210> 240
<211> 565
<212> DNA
<213> Homo sapiens

<400> 240
ccgggcaggt acccagggaa caaatgctac tgggactcca cacctaccta agaagcagct 60
ctacccagac tccacatggc tctctgtttt ggtctggaga ccccagctgg ggtatctcct 120
gagcccaggg attcaaaggt tcgtggcaga aatatgcatc ccacgggact ctcactcact 180
caccattttc ttgtaggggg attcccctgg gtctgtgcca ctcctgggtg aatggttgat 240
ctgtctcact cttctccgtg atccgaaggt cacactatgt cactgatgaa tccttatgtg 300
tccacctgga tgttccggtt gaagagctag tgtctcacca ctctttctgc tatttgtgag 360
agtggcacac actagctgct tctagtcaac catcttggcc ccacctcact cactttctc 420
aagtaatcaa agaccagaaa ggatgtcctt tacaagagca gatcccccaa aatgtaagag 480
ttcactgaaa aggtgggagc tcaaaccaag agaggaccta tctcgcagca taaagacaac 540
ttgtacctcg gccgctctag aacta 565

<210> 241
<211> 236
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 171
<223> n = A,T,C or G

<400> 241
aggtacagtg tctccgtccc gcggaaaaag aagcctctga acccgcgccg gcccgcagcc 60
cccgtgcctt ccggccgccc gggcaggtac gcgggggccg cggagacaaa gatggctgcg 120
agagtcggcg ccttctcaag aatgcctggg acaaggagcc agtgctggtc ngtgtccttc 180
gtcgtcgggg gcctcgctgt aattctaccc ccattgagcc cctacttcaa gtacct 236

<210> 242
<211> 153
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 21, 26, 55, 57, 60, 68, 71, 85, 146
<223> n = A,T,C or G

<400> 242
agtgaactaa ctcacattaa nttgcnttgg cgcctcactg gccgcttttc aagtncnggn 60
aaacctgntc ntgccaggct ggcanttaat tgaaatcggg ccaaacgccc ccggggagaa 120
ggcggttttg cgtatttggg cggctntttc cgc 153

<210> 243
<211> 411

<212> DNA
<213> Homo sapiens

<400> 243
accgcggtgg cggcccgagg tacatgacgg gatttcacta tgttggccag gctggtctca 60
aattcctgac ctcgtgaccc acgtgccttg gcctgccaac atgctgggat tgcaggtgtg 120
agccaccgcg cccggcccca acttctccta atgttgctat tttgatctta ttttttaaat 180
catgaatgtt ctcaatgaca tctagaatgg tgaatccttt ccagtaggtt ttcaattatt 240
ttgcccagat ccatcaaagg aatcactttc tagagaagtt atagctttat gaaatatatt 300
tttaagtgat aaagacttga aagttgcaat tattctttga tccaagggca ccaagaatga 360
atgttgggtt agtaggcatg aaaacaatat tcagctcttt gtacctgccc g 411

<210> 244
<211> 535
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 510
<223> n = A,T,C or G

<400> 244
ggagctccac cgcggtgggc ggccgaggta caagcagtaa ttgattcact ggccttgggc 60
tacttgcagg tcagcttgtc tcacataaca ggttggtata tgtataacta tcacataatt 120
atgcatttta gtaaaaataa ttgtttagaa ctggcttcgg gcagttgtga cctctaactg 180
taatttcctt gcttcttctg tatgtttcca cctcttgtgc tgtgcgccta gccaaatcag 240
ggtgctcttg ataaaaattc ttctcaaatt taggcagctc atcaagattc cacttctttt 300
taactaattt ctcccccaggg tttccaaact tctttcagat aagggccctg ccctacttcc 360
tccaaatcga ggtgcaccaa accctcggtc ccggccgtgc ttctgctatg gcgaaggagc 420
cctcggcctt caaccactgt gcccacgcct accggttttc tggggatgtt gccaccacct 480
ctgaagagtg aaaccaagct tttcatgcan gaagagccag gtgctggggg gcttc 535

<210> 245
<211> 211
<212> DNA
<213> Homo sapiens

<400> 245
tctgaatgat cgcgttgctc gagctgccgt tggaagctta gaagcaggtg ctaccgtgct 60
agatacaaag cgatctattt aaaagccctc tgtcacgcac gcacacttac tgacgaatct 120
tctggctctc tcctaccccg cccggtggcg gattccggaa ttggttcaaa aggccttgat 180
cccgaacacc caggacagag acagagtacc t 211

<210> 246
<211> 463
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 262, 378, 445
<223> n = A,T,C or G

<400> 246
cgaggtacaa gcagtaattg attcactggc cttggactac ttgcaggtca agcttgtctc 60
acataacagg ttggtatatg tataactatc acataattat gcattttagt aaaaataatt 120
gtttagaact ggcttcgggc agttgtgacc tctaactgta atttccttgc ttcttctgta 180
tgtttccacc tcttgtgctg tgcgcctagc caaatcaggg tgctcttgat aaaaattctt 240

ctcaaattta ggcagctcat cnagattcca cttcttttta actaatttct ccccagggtt 300
tccaaacttc tttccagata agggccctgc cctacttcct ccaaatcgag gtgcaccaaa 360
ccctcggtcc ccggccgntc taagaactaa ttggatcccc cgggctggca ggaattcgat 420
atccaagctt aatcgatccc gtcgnacctc gagggggggg ccc 463

<210> 247
<211> 229
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 145
<223> n = A,T,C or G

<400> 247
cgaggtactc tgcgttgtta ccacaggcga tgacagctcc atgtgtgtta ttgcccctga 60
agaccttcca gagacaaaat gtggaggtgg aagacagtga tactgatgac cctgaccctg 120
tgtggatcta ggctaacatg tgttnttgtg tcttagtttt caacaaaaaa gtttaaaaag 180
ttaaaatact aagtttataa agttaaaaag ttaccccgcg tcctgcccg 229

<210> 248
<211> 98
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 24, 28, 68, 69
<223> n = A,T,C or G

<400> 248
atcatggnca tagcttgttt ctgntgtnaa attgttatcc gcttcacaaa ttcccacaca 60
aacatacnna gcccgggaag cataaaagtg taaaggcc 98

<210> 249
<211> 138
<212> DNA
<213> Homo sapiens

<400> 249
gggcgaattg gagctcaccg cggtggcggc ccgaggtacg cggggatgct gcgcctctcc 60
gaacgcaaca tgaaggtgct ccttgccgcc gccctcatcg cggggtccgt cttcttcctg 120
ctgctgccgg gaccttct 138

<210> 250
<211> 472
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 458
<223> n = A,T,C or G

<400> 250
nattggagct ccccgcggtg gcggccgagg tacaagttgt ctttatgctg cgagataagt 60
cctctcttgg tttgagctcc cacctttca gtgaactctt acattttggg ggatctgctc 120
ttgtaaagga catcctttct ggtctttgat tacttgagaa aagtgagtga ggtggggcca 180

agatggttga ctagaagcag ctagtgtgtg ccactctcac aaatagcaga aagagtggtg 240
agacactagc tcttcaaccg gaacatccag gtggacacat aaggattcat cagtgacata 300
gtgtgacctt cggatcacgg agaagagtga gacagatcag ccattcaccc aggagtggca 360
cagacccagg ggaatccccc tacaagaaaa tggtgagtga gtgagagtcc cgtggggatg 420
catatttctg ccacgaacct ttgaatccct gggctcanga gataccccag ct 472

<210> 251
<211> 399
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 155
<223> n = A,T,C or G

<400> 251
attggagctc cccgcggtgg cggccgccgg gcaggtacaa gcagtaattg attcactggc 60
cttggactac ttgcaggtca gcttgtctca cataacaggt tggtatatgt ataactatca 120
cataattatg catttagta aaaataattg tttanaactg gcttcgggca gttgtgacct 180
ctaactgtaa tttccttgct tcttctgtat gtttccacct cttgtgctgt gcgcctagcc 240
aaatcagggt gctcttgata aaaattcttc tcaaatttag gcagctcatc aagattccac 300
ttctttttaa ctaatttctc cccagggttt ccaaacttct ttccagataa gggccctgcc 360
ctacttcctc caaatcgagg tgcaccaaac cctcggtcc 399

<210> 252
<211> 467
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 219, 408, 449
<223> n = A,T,C or G

<400> 252
aattggagct ccccgcggtg gcggccgccc gggcaggtac cacatgcctg taatcccagc 60
tacttggaag ctgaggcagg agaatctctt gaacttggaa ggcggaggtt gcagtgaacc 120
aaaatcacgc cacagcactc cagcctggga gacagagcaa ggcttagttt taaaaaaaaa 180
atcaaatatt gtgtgattct gtttatagga aatattcana attggtaagt ccataaggac 240
aaaaaccaga ttgacagggg ctgagatgaa aaagagaatg gggtatgggg agtgacagct 300
tgataggtat gggttttgtt gggggagat aatgaaaaca tttggaacta ggagaatcac 360
ctgacatcag gagttcaaga ccactgaact cgaacctggg tgacagantg agactccgtc 420
tcaaaaaaaa aaaaaatgtt tggaactana tggtggtggt tgtacct 467

<210> 253
<211> 266
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 154
<223> n = A,T,C or G

<400> 253
ttggagctcc ccgcggtggc ggccgcccgg gcaggtactg tgggtgggac aaaatatttt 60
ttcagatttt tagacttgga atatgattcc tgctgtctag cagaataaga agaagataat 120
ggcaggagga cagcacggac taaactccaa gcanaaaaaa acaaaaagat caaatttaag 180

acctttttgg tgagcccgtt ttaatcctgg tcctactctg tcccaaattt ctacatcaag 240
actgcctgtc tgtggaaacc acgggt 266

<210> 254
<211> 460
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4
<223> n = A,T,C or G

<400> 254
ggcngattgg agctccccgc ggtggcggcc gaggtacaag ttgtctttat gctgcgagat 60
aagtcctctc ttggtttgag ctcccacctt ttcagtgaac tcttacattt tgggggatct 120
gctcttgtaa aggacatcct ttctggtctt tgattacttg agaaaagtga gtgaggtggg 180
gccaagatgg ttgactagaa gcagctagtg tgtgccactc tcacaaatag cagaaagagt 240
ggtgagacac tagctcttca accggaacat ccaggtggac acataaggat tcatcagtga 300
catagtgtga ccttcggatc acggagaaga gtgagacaga tcagccattc acccaggagt 360
ggcacagacc caggggaatc cccctacaag aaaatggtga gtgagtgaga gtcccgtggg 420
atgcatattt ctgccacgaa cctttgaatc cctgggctca 460

<210> 255
<211> 452
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 427
<223> n = A,T,C or G

<400> 255
aattggagct ccccgcggtg gcggcccgag gtacatcatt tccagagcag gcactggcag 60
cgagataggg ttggaggaga agtagcgccg ggacttccgg atggcaaact tctctgtggg 120
tagagatttc ccagcaatct tgagcttcag gcctggacag ctcgaaataa ttccacttcg 180
tcgtccccga acggcttgtg gtcctccttc ccaaacatgc tgaggtaggc ggccttcatg 240
taaatgtagg tggccttttt aagtcagatc atgtcagttc cttctggaaa tctggttata 300
ttccatcaca ctcaggagac atctcctaca atttccttga cacctgcagc actccagcca 360
cacgacggcc tcagggcggt tcccaggaca catcaaacac actcctgccc tgctgtgccc 420
tgcccanctc cctctccccg cgtacctgcc cg 452

<210> 256
<211> 429
<212> DNA
<213> Homo sapiens

<400> 256
tagggcgaat tggagctccc cgcggtggcg gccgcccggg caggtaccca gggaacaaat 60
gctactggga ctccacacct acctaagaag cagctctacc cagactccac atggctctct 120
gttttggtct ggagacccca gctggggtat ctcctgagcc cagggattca aaggttcgtg 180
gcagaaatat gcatcccacg ggactctcac tcactcacca ttttcttgta gggggattcc 240
cctgggtctg tgccactcct gggtgaatgg ttgatctgtc tcactcttct ccgtgatccg 300
aaggtcacac tatgtcactg atgaatcctt atgtgtccac ctggatgttc cggttgaaga 360
gctagtgtct caccactctt cctgctattt gtgagagtgg cacacactag ctgcttctag 420
tcaaccatc 429

<210> 257

<211> 477
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 248
<223> n = A,T,C or G

<400> 257
gggcnaattg gagctccccg cggtggcggc cgaggtactg tccaactgga tgctgccctg 60
gtggctgaag gcacacttca tgatgctgtc cagggtcatc agggagacat gttgaaagag 120
ctccagacgt gagttttggg caatgtgttc ctcccatttg ttcagcatca tccgaacact 180
cttagacatc atggtgatga atattttcag aatgctgatg ttgaagccag gtttcacaat 240
ctggcggngc tttttccatt tagaaccatc cagggtcaca agtcctcgac caacccagga 300
ttcaaggatt ttgtggctaa cagcactttt gggatcttgt cttttcagga gaatcttgac 360
atagtctggg tcatggatat tgaagaacat cgtaaagggt ccaacccaca agggaacggc 420
acatgggtat ttttccatca gctcaggatc acctcaaact cttttactgg gtaagac 477

<210> 258
<211> 400
<212> DNA
<213> Homo sapiens

<400> 258
gcgaattgga gctccacccg cggtggcggc ccgaggtaca agcagtaatt gattcactgg 60
ccttggacta cttgcaggtc agcttgtctc acataacagg ttggtatatg tataactatc 120
acataattat gcattttagt aaaaataatt gtttagaact ggcttcgggc agttgtgacc 180
tctaactgta atttccttgc ttcttctgta tgtttccacc tcttgtgctg tgcgcctagc 240
caaatcaggg tgctcttgat aaaaattctt ctcaaattta ggcagctcat caagattcca 300
cttcttttta actaatttct ccccagggtt tccaaacttc tttccagata agggccctgc 360
cctacttcct ccaaatcgag gtgcaccaaa ccctcggtcc 400

<210> 259
<211> 249
<212> DNA
<213> Homo sapiens

<400> 259
aggtacagga cattcctctg ctcctattgc ccctgtttcc gttcttttca cactgtctgt 60
gggtgctgtg ccctgttgga actctcttta acgtcttacg ttggagccgc taaccttccc 120
caggtgtttg cttcattgct ttcacaggga aagaattact cgtcccactg acgagttcta 180
tgtatgtccc tgggaagctg catgatgtgg aacacgtgct catcgatgtg ggaactgggt 240
acctgccccg 249

<210> 260
<211> 231
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 11, 13, 16, 17, 21, 38
<223> n = A,T,C or G

<400> 260
gcgaggtnct ntncgnngtt nccacacgcg atgacagntc catgtgtgtt attgcccctg 60
aagaccttcc agagacaaaa tgtggaggtg gaagacagtg atactgatga ccctgacccct 120
gtgtggatct aggctaacat gtgtttttgt gtcttagttt tcaacaaaaa agtttaaaaa 180

gttaaaatac taagtttata aagttaaaaa gttaccccgc gtacctgccc g 231

<210> 261
<211> 452
<212> DNA
<213> Homo sapiens

<400> 261
ccgggcaggt actgtccaac tggatgctgc cctggtggct gaaggcacac ttcatgatgc 60
tgtccagggt catcagggag acatgttgaa agagctccag acgtgagttt tgggcaatgt 120
gttcctccca tttgttcagc atcatccgaa cactctcaga catcatggtg atgaatattt 180
tcagaatgct gatgttgaag ccaggtttca caatctggcg gtgcttttc catttagaac 240
catccagggt cacaagtcct cgaccaaccc aggattcaag gattttgtgg ctaacagcac 300
ttttgggatc ttgtcttttc aggagaatct tggcatagtc tgggtcatgg acactgaaga 360
acatcgtaaa gggtccaacc cacaagggaa cagcacatgg gtatttttcc atcagcttat 420
gataccccctc aaactccttt actgggtaaa ac 452

<210> 262
<211> 511
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 27, 436, 485
<223> n = A,T,C or G

<400> 262
naattggagc tccccgcggt ggcggcncga ggtacctgtg gcagcccttc ttcagacacg 60
gctacttctg cttccacgag gctgctgacc agaagaggtt tagtgccctc ctgagtgact 120
gcgtcaggca tctcaatcat gattacatga agcagatgac atttgaagcc caggcctttt 180
tagaagctgt gcaattcttc cgacaggaga agggtcacta tggttcctgg gaaatgatca 240
ctggggatga aatccagatc ctgagtaacc tggtgatgga ggagctcctg tccactcttc 300
agacagacct gctgcctaag atgaagggga agaagaatgg cagaaagagg acgtggctcg 360
gtctcctcga ggaggcctac accctggttc agcatcaagt ttcagaagga ttaagtgcct 420
tgaaggagga atgcanagct ctgacaaagg gcctggaagg aacgatccgt tctgacatgg 480
atcanattgt gaactcaaag aactatttaa t 511

<210> 263
<211> 259
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3
<223> n = A,T,C or G

<400> 263
gcnaattgga gctccccgcg gtggcggccc gaggtactct gcgttgttac cacaggcgat 60
gacagctcca tgtgtgttat tgcccctgaa gaccttccag agacaaaatg tggaggtgga 120
agacagtgat actgatgacc ctgaccctgt gtggatctag gctaacatgt gtttttgtgt 180
cttagttttc aacaaaaaag tttaaaaagt taaaatacta agtttataaa gttaaaaagt 240
taccccgcgt acctgcccg 259

<210> 264
<211> 508
<212> DNA
<213> Homo sapiens

<400> 264
attggagctc cccgcggtgg cggccgaggt acacttcccg gggaaccacc cactgggctg 60
caatctccca gggagactgc aaggtatggt ccagcttggg tgccagctcc acccgcaagc 120
cagtcatcat tcggtgaaag gccctctggt cctcccggtt ggcagctgat gtatctaagt 180
tgtcaatcag gaaaactttg gtgaagataa aaatgacaag gagaattgct aacagcacga 240
ctcgctgctt tagcttcatg ttgacctctt ttccttctcc tctgacccac tcttgctcat 300
gtattaagga gagctggtgg tgatggttag caaggagatt ccatgattat acacattggt 360
ccatttcttc actgatgcac cttccacagt tccttcctcc atacgcaaac acagactggc 420
aattcacaag taaatgcaag gttttcaata tccaacagtt tgtagtcatg aaaaaaaagt 480
caaaagtaaa acactccgta cctgccccg 508

<210> 265
<211> 250
<212> DNA
<213> Homo sapiens

<400> 265
ctccccgcgg tggcggcccg cccgggcagg tacgcggggt aactttttaa ctttataaac 60
ttagtatttt aactttttaa actttttgt tgaaaactaa gacacaaaaa cacatgttag 120
cctagatcca cacagggtca gggtcatcag tatcactgtc ttccacctcc acattttgtc 180
tctggaaggt cttcaggggc aataacacac atggagctgt catcgcctgt ggtaacaacg 240
cagagtacct 250

<210> 266
<211> 407
<212> DNA
<213> Homo sapiens

<400> 266
tagggcgaat tggagctccc cgcggtggcg gccgggaccc gagggtttgg tgcacctcga 60
tttggaggaa gtagggcagg gcccttatct ggaaagaagt ttggaaaccc tggggagaaa 120
ttagttaaaa agaagtggaa tcttgatgag ctgcctaaat ttgagaagaa tttttatcaa 180
gagcaccctg atttggctag gcgcacagca caagaggtgg aaacatacag aagaagcaag 240
gaaattacag ttagaggtca caactgcccg aagccagttc taaacaatta tttttactaa 300
aatgcataat tatgtgatag ttatacatat accaacctgt tatgtgagac aagctgacct 360
gcaagtagtc caaggccagt gaatcaatta ctgcttgtac ctgccccg 407

<210> 267
<211> 641
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 426, 521, 548, 557, 560, 592, 596, 598, 603, 604, 618, 619, 620, 629
<223> n = A,T,C or G

<400> 267
ccgcggtggc ggcccgaggt ataatgccag gaagatgaat gtgcgttaat gttgctggaa 60
catggcactg atccaaacat tccagatgag tatggaaata ccactctaca ctacgctatc 120
tacaatgaag ataaattaat ggccaaagca ctgctcttat acggtgctga tatcgaatca 180
aaaaacaagc atggcctcac accactgcta cttggtgtac ctgcccgggc ggccgcccgg 240
gcaggtacgc gggacccaaa aaccacaccc ctccttggga gaatccccta gatcacagct 300
cctcaccatg gactggacct ggagcatcct tttcttggtg gcagcagcaa caggtgccca 360
ctcccaggtt cagctggtgc agtctggagc tgaggtgaag aaacctgggg cctcagtgaa 420
ggtctnctgc aaggcttctg gttacacctt taccagcaat gggtatcagc tgggtgcgac 480
aggcccctgg acaagggctt gagtggatgg gatgggatca ncgcttacaa tgggtaacac 540

aaactacnca caagaanctn cagggcagag tcaccatgac cacagacaca tncacnanca 600
cannctacat gggagctnnn ggagcctgna atcttacgac c 641

<210> 268
<211> 328
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 155, 261, 272, 273, 279, 288, 291, 297, 301, 303, 309, 314,
316, 319
<223> n = A,T,C or G

<400> 268
ccgggcaggt acaatgcctt gaacatcgtc ctgcttccca gtgggttcag acctcacctc 60
tcagggagcg acctgggcaa agacagagaa gctcccagaa ggagagattg atccatgtct 120
gtttgtagga cggagaaacc gcttgggtaa cttgntcaag atatgatcgc atgttgcttt 180
ctaagaaagc cctgtatttt gtgattgtct tttttttttt taagatgctt tcattttgcc 240
aaaataaaac agataatgtt naaaaaaaaa annaaaaant caaaaatnaa ngtgccnggg 300
ncnctctana actngnggnt cccccggg 328

<210> 269
<211> 257
<212> DNA
<213> Homo sapiens

<400> 269
aattggagct ccccgcggtg gcggccgccc gggcaggtac gcggggtaac tttttaactt 60
tataaactta gtattttaac tttttaaact tttttgttga aaactaagac acaaaaacac 120
atgttagcct agatccacac agggtcaggg tcatcagtat cactgtcttc cacctccaca 180
ttttgtctct ggaaggtcct caggggcaat aacacacatg gagctgtcat cgcctgtggt 240
aacaacgcag agtacct 257

<210> 270
<211> 368
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 288
<223> n = A,T,C or G

<400> 270
aggtacaagc agtaattgat tcactggcct tggactactt gcaggtcagc ttgtctcaca 60
taacaggttg gtatatgtat aactatcaca taattatgca ttttagtaaa aataattgtt 120
tagaactggc ttcgggcagt tgtgacctct aactgtaatt tccttgcttc ttctgtatgt 180
ttccacctct tgtgctgtgc gcctagccaa atcagggtgc tcttgataaa aattcttctc 240
aaatttaggc agctcatcaa gattccactt ctttttaact aatttctncc cagggtttcc 300
aaacttcttt ccagataagg gccctgccct acttcctcca aatcgagggt gcaccaaacc 360
ctcggtcc 368

<210> 271
<211> 523
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 322, 337, 424, 493, 509
<223> n = A,T,C or G

<400> 271
ccgggcaggt acgcgggtca tggatcgaag actcatgcaa gatgataatc gtggccttga 60
gcaaggtatc caggataaca agattacagc taatctattt cgaatactat tagaaaaaag 120
aagtgctgtt aatacggaag aagaaaagaa gtcggtcagt tatccttctc tccttagcca 180
cataacttct tctctcatga atcatccagt cattccaatg gcaaataagt tctcctcgcc 240
taccccttgag ctgcaaggtg aattctctcc attacagtca tcttttgcct tgtgacattc 300
atctggttaa tttgagaaca anacaagtca aaaggtnggc aatggggcac ttccaaatga 360
aggcagcctt ggatcctcca caagaaaagg gttttgattt gtcggtttct tctaagcaaa 420
gggnacaagg ggttggtttt tggttctact acctcagggg gaaaaggaat atttggtacc 480
ctttgggccc gcntcttaga aacttagtng gaatcccccc ccg 523

<210> 272
<211> 475
<212> DNA
<213> Homo sapiens

<400> 272
ccgcggtggc ggcccgaggt accaaaaaga ctctcaaaaa ccaatactcc cacgggcaag 60
ggaatagcca agtttgttgc ggtttccaat gaatgacatc agccctgtgt aggtctcaat 120
caaaatgggt tcagttaaca ccatcagttt ctttcctctt ccagatccag ttgaattctt 180
gtgggcattc tggatagctg gaacaagctt agacatgaac ccagacaact tgcaaatttc 240
aaggaatttc tcactggtgt atttcatagg atgctcagtg aaagtagcat aaggaacttc 300
agtggaccat gggttccggc gggacagaag agactgctcc tccggactcc cccagtagat 360
cctaaggcct tctccttgtc tcttgtccag ggacatccca gggaaggtga acttgcccag 420
gcagatgcga tagacagcgc tcagaggaat ccgctgcagc tgcacacaac tcagc 475

<210> 273
<211> 478
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 338, 414, 433, 465
<223> n = A,T,C or G

<400> 273
aggtactttc tctttgtctc tgccttccag gcaacaggga ttttggggta gtagttagct 60
ctacaaatta tcttgagcag ttaaaagcct ttgcaagctc aaaatttact gctctgggct 120
ccttctggga aaagcagtgg aaactgccca atgctgtagc ttagcagtta aggctttgtc 180
ttttcacaat ggtggcctga gttcaggttc aatttttagc ctaggaaaat gagcactttc 240
tggttggcat ttgggtgacc tgtgccattt tgttggattc ttcctcccct ttcataaact 300
gtcttaaatt ttccttttct tctgagcacc tgggaggnta cattttggaa aagttaaaaa 360
gccagggaac ccgcgtacct gcccgggcgg gccgctctaa gaactagtgg gatncccccg 420
ggctggcagg aanttcgata tcaaagctta tcgatacccg gcganctcga ggggggg 478

<210> 274
<211> 481
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 204, 266, 320, 328, 402, 424, 462, 470
<223> n = A,T,C or G

<400> 274
accgcggtgg cggccgcccg ggcaggtacg cgttttacaa agagcagctt gttaaggcca 60
aagaacagta ttgaaaatta caagaaaaca gaccagtaaa tggtctgggg aaggatcatg 120
aaatcctgag gaggaggatt gaaaatggag ctaaagagct ctggtttttc ctacagagtg 180
aattgaagaa attaaagaac ttanaaggaa atgaactcca aagacatgca agatgaattt 240
cttttgggat tttaggacat catganaagg tctattaatg gaccggatct atacttacct 300
cagttcatga caggattggn aagccagngt tgaatttggg ccggggaaaa aaaggaggcc 360
caaaaagtat ccttgaacaa ggaaacttgg gttccaggcc gngaggaaat taaccattaa 420
ttcntttcaa gaaaatcccc aaagggggac cttggcaatc anaaaggccn aaaaaaaagc 480
c 481

<210> 275
<211> 642
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 494, 584, 594, 599, 605, 617, 619, 628
<223> n = A,T,C or G

<400> 275
ccgggcaggt acccagggaa caaatgctac tggggctcca cacctaccta agaagcagct 60
ctacccagac tccacatggc tctctgtttt ggtctggaga ccccaactgg ggtatctcct 120
gagcccaggg attcaaaggt tcgtggcaga aatatgcatc ccacgggact ctcactcact 180
caccattttc ttgtaggggg attcccctgg gtctgtgcca ctcctgggtg aatggttgat 240
ctgtctcact cttctccgtg atccgaaggt cacactatgt cactgatgaa tccttatgtg 300
tccacctgga tgttccggtt gaagagctag tgtctcacca ctctttctgc tatttgtgag 360
agtggcacac actagctgct tctagtcaac catcttggcc ccacctcact cactttctc 420
aagtaatcaa agaccagaaa ggatgtcctt tacaagaaca gatcccccaa aatgtaagag 480
ttcactgaaa aggngggagc tcaaaccaag agaggactta tctcgcaaca taaagacaac 540
ttgtaccttg ggccggtcta gaactaaggg gatccccggg ctgnaaggaa ttcnatatna 600
aagcntattg gatcccncng acctcgangg gggggcccgg ga 642

<210> 276
<211> 478
<212> DNA
<213> Homo sapiens

<400> 276
cgggggccat tgagactgcc atggaagact tgaaaggtca cgtagctgag acttctggag 60
agaccattca aggcttctgg ctcttgacaa agatagacca ctggaacaat gagaaggaga 120
gaattctact ggtcacagac aagactctct tgatctgcaa atacgacttc atcatgctga 180
gttgtgtgca gctgcagcgg attcctctga gcgctgtcta tcgcatctgc ctgggcaagt 240
tcaccttccc tgggatgtcc ctggacaaga gacaaggaga aggccttagg atctactggg 300
ggagtccgga ggagcagtct cttctgtccc gctggaaccc atggtccact gaagttcctt 360
atgctacttt cactgagcat cctatgaaat acaccagtga gaaattcctt gaaatttgca 420
agttgtctgg gttcatgtct aagcttggtc caactattcc agaatgccca caagaatt 478

<210> 277
<211> 251
<212> DNA
<213> Homo sapiens

<400> 277
ccgcggtggc ggcccgaggt actgagcgcg cgaggctcta cagagtgaag gtttaaatcc 60
aaggtcatgg caaaacatct gaagttcatc gccaggactg tgatggtacg cgggggactc 120
ggggtcgcct ttggagcaga gaggaggcaa tggccaccat ggagaacaag gtgatctgcg 180

ccctggtcct ggtgtccatg ctggccctcg gcaccctggc cgaggcccag acagagacgt 240
gtacctgccc g 251

<210> 278
<211> 477
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 222
<223> n = A,T,C or G

<400> 278
ccgcggtggc ggcccgaggt acgcgggcct gctgctgctg cagccccagc taaggttgaa 60
gccaaggaag agtcggagga gtcggacgag gatatgggat ttggtctctt tgactaatca 120
ccaaaaagca accaacttag ccagttttat ttgcaaaaca aggaaataaa ggcttacttc 180
tttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaagg tncatggtca tttgaaaggc 240
aaaatcttta tttacttact tattatttta ttttttgtag agatgaggcc tcactatatt 300
gttcaggctg atcttgaact cttgggctca agtgatcctc ctgcctcaac ctcccaagtg 360
ctggggtcat aggcatgagc cactgtgcct ggcccagaat cctttttaaa atgatgatga 420
aatgccagag tcttagatac tcagcactca ctatccaggc cattttgccg ggtagat 477

<210> 279
<211> 498
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 12
<223> n = A,T,C or G

<400> 279
cgaggtactt tntttttttt ttttttcttt tttttgagac gggatctagc cctgcagcct 60
ctgcctccca ggctcaagct attctcgtgt cttggcctcc cgagtagctg ggattactgg 120
tgcatgccac atgcctggct aatttctgta tttttagtag agacagagtt tcaccatgtt 180
ggccaggttg gtctcgaatt cctggcctca ggtgatcctc ccacctcagc ctcccaaaat 240
gctgggttac aggcccgagt cacagggcct ggcctagccc tatctttacc attagctcca 300
ttttacaagt tgtcatgggg ggtagtacac agaaggatcg cgcagctaaa aagcaacagg 360
gttgggagtg gaaaccaggt ttgtgtcctc ctctcttctt cggctcccta gtcgccttgg 420
ggagttccca ccaatggggc ccaaacctga tcatcaaaat caacaggaaa catcttcaaa 480
aagggtccag ggcccgcc 498

<210> 280
<211> 245
<212> DNA
<213> Homo sapiens

<400> 280
ccgcggtggc ggccgcccgg gcaggtacgc ggggtaactt tttaacttta taaacttagt 60
attttaactt tttaaacttt tttgttgaaa actaagacac aaaaacacat gttagcctag 120
atccacacag ggtcagggtc atcagtatca ctgtcttcca cctccacatt ttgtctctgg 180
aaggtcttca ggggcaataa cacacatgga gctgtcatcg cctgtggtaa caacgcagag 240
tacct 245

<210> 281
<211> 192
<212> DNA

<213> Homo sapiens

<400> 281
cgaattggag ctccacccgc ggtggcggcc gcccgggcag gtacgcgggc tcctacttgg 60
ataactgtgg taattctaga gctaatacat gccgacgggc gctgaccccc ttcgcggggg 120
ggatgcagtg catttatcag atcaaaacca acccggtcag cccctctccg gccccggccg 180
ctctagaact at 192

<210> 282
<211> 367
<212> DNA
<213> Homo sapiens

<400> 282
ggaccgaggg tttggtgcac ctcgatttgg aggaagtagg gcagggccct tatctggaaa 60
gaagtttgga aaccctgggg agaaattagt taaaaagaag tggaatcttg atgagctgcc 120
taaatttgag aagaattttt atcaagagca ccctgatttg gctaggcgca cagcacaaga 180
ggtggaaaca tacagaagaa gcaaggaaat tacagttaga ggtcacaact gcccgaagcc 240
agttctaaac aattattttt actaaaatgc ataattatgt gatagttata catataccaa 300
cctgttatgt gagacaagct gacctgcaag tagtccaagg ccagtgaatc aattactgct 360
tgtacct 367

<210> 283
<211> 376
<212> DNA
<213> Homo sapiens

<400> 283
cgcccgggca ggtacaagca gtaattgatt cactggcctt ggactacttg caggtcagct 60
tgtctcacat aacaggttgg tatatgtata actatcacat aattatgcat tttagtaaaa 120
ataattgttt agaactggct tcgggcagtt gtgacctcta actgtaattt ccttgcttct 180
tctgtatgtt tccacctctt gtgctgtgcg cctagccaaa tcagggtgct cttgataaaa 240
attcttctca aatttaggca gctcatcaag attccacttc tttttaacta atttctcccc 300
agggtttcca aacttctttc cagataaggg ccctgcccta cttcctccaa atcgaggtgc 360
accaaaccct cggtcc 376

<210> 284
<211> 328
<212> DNA
<213> Homo sapiens

<400> 284
ccgcggtggc ggccgaggac gcgggcaagc ccaaggttaa aaaggcgggc ggaaccaaac 60
ctaagaagcc agttggggca gccaagaagc ccaagaaggc ggctggcggc gcaactccga 120
agaagagcgc taagaaaaca ccgaagaaag cgaagaagcc ggccgaggta ccaatagcag 180
gagcagaaag gccaaaatca tgagcgcaat tgctgcgggt cccaggccca cataggagtc 240
atgctgtgct tccctgcagc cgctgccatg cagacactca caaactgtga gtgtaaggac 300
ctgcttttca ggacaactaa aaccctga 328

<210> 285
<211> 229
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 104, 161
<223> n = A,T,C or G

<400> 285
ccgggcaggt acgcggggta actttttaac tttataaact tagtatttta actttttaaa 60
ctttttttgtt gaaaactaag acacaaaaac acatgttagc ctanatccac acagggtcag 120
ggtcatcagt atcactgtct tccacctcca cattttgtct ntggaaggtc ttcaggggca 180
ataacacaca tggagctgtc atcgcctgtg gtaacaacgc agagtacct 229

<210> 286
<211> 450
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 126, 398
<223> n = A,T,C or G

<400> 286
ccgcggtggc ggccgcccgg gcaggtacgc ggggagaggg agctgggcag ggcacagcag 60
ggcaggagtg tgtttgatgt gtcctgggaa ccgccctgag gccgtcgtgt ggctggagtg 120
ctgcangtgt caaggaaatt gtaggagatg tctcctgagt gtgatggaat ataaccagat 180
ttccagaagg aactgacatg atctgactta aaaaggccac ctacatttac atgaaggccg 240
cctacctcag catgtttggg aaggaggacc acaagccgtt cggggacgac gaagtggaat 300
tatttcgagc tgtgccaggc ctgaagctca agattgctgg gaaatctcta cccacagaga 360
agtttgccat ccggaaagtc ccggcgctac ttctcttnca accctatctc gctgcagtgc 420
ctgctctgga aatgatgtac ctcgggcgct 450

<210> 287
<211> 56
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 22, 28, 31, 39
<223> n = A,T,C or G

<400> 287
tcaactttat tgatanccgt cnaacttnga nggggggnc ccggtcccaa cttttg 56

<210> 288
<211> 463
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 313, 404
<223> n = A,T,C or G

<400> 288
cgaggtaccc agggaacaaa tgctactggg actccacacc tacctaagaa gcagctctac 60
ccagactcca catggctctc tgttttggtc tggagacccc agctggggta tctcctgagc 120
ccagggattc aaaggttcgt ggcagaaata tgcatcccac gggactctca ctcactcacc 180
attttcttgt agggggattc ccctgggtct gtgccactcc tgggtgaatg gctgatctgt 240
ctcactcttc tccgtgatcc gaaggtcaca ctatgtcact gatgaatcct tatgtgtcca 300
cctggatgtt ccngttgaag agctagtgtc tcaccactct ttctgctatt tgtgagaagt 360
ggcacacact agctgcttct agtcaaccat cttggcccca cctnactccc ttttctcaag 420
taatcaaaga ccagaaagga tgtcctttac aaagagcaga tcc 463

<210> 289
<211> 123
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 118
<223> n = A,T,C or G

<400> 289
ccgcggtggc ggccgaggta ccgcgggata gtaacttctt atggaattga tttgcattga 60
acacaaactg taaataaaaa gaaatggctg aaagagaaaa aaaaaaaaaa aaaaaaangt 120
cct 123

<210> 290
<211> 396
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 77, 346, 357
<223> n = A,T,C or G

<400> 290
gtggcngccc gggaccgagg gttcggtgca cctcgatttg gaggaagtag ggcagggccc 60
ttatctggaa agaagtntgg aaaccctggg gagaaattag ttaaaaagaa gtggaatctt 120
gatgagctgc taaatttgag aagaattttt atcaagagca ccctgatttg gctaggcgca 180
cagcacaaga ggtggaaaca tacagaagaa gcaaggaaat tacagttaga ggtcacaact 240
gcccgaagcc agttctaaac aattattttt actaaaatgc ataattatgt gatagttata 300
catataccaa cctgttatgt gagacaagct gacctgcaac gtagtncaag gccaagngaa 360
tcaattactg cttgtacctc ggccgctcta gaacta 396

<210> 291
<211> 205
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 103, 160, 168, 194, 199
<223> n = A,T,C or G

<400> 291
aggtaccata ttaagtggag agctgcagca aggtggcccc tacagcccgc aaaccagcct 60
gcacattacc tctccatact gcagcccttt atatggaaac ttnttacatc actttgctgt 120
gtgtgttaca caaggtgggg ttttgctgta cctgccccgn accggccntt tctagaacta 180
gttggatccc cggncctgna ggaat 205

<210> 292
<211> 81
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 30, 31, 57, 60
<223> n = A,T,C or G

<400> 292
agctgtttcc tggtgtgaaa attggtattn ngcttcacaa ttccacacaa caatacnaan 60
cccgggagcc ataaaagtgt a 81

<210> 293
<211> 362
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 45, 108, 111, 223, 284, 353
<223> n = A,T,C or G

<400> 293
ccgggcaggt actttttttt tttttttttt tttttttct gaggncagcg tatgtgtatt 60
tggtggggaa aacctaattt cggggatttc tgtggtaggt aataggagnaa naaagggcac 120
tgggggctgt tctccttcct tccctgggct gtatccatgg actcctgtgg ctgtcaggca 180
gggggattgt gatgggagca gctttcctgg agtccttcac agnggcgttt accttcatag 240
ttgatacaac cattgctgtc ctcatgccct gccaccagca tctntacttc ttcctctgtc 300
atcttctcac ccagtgtgac aagaacatgc cggatttcag cacccatgac ggngccattt 360
cc 362

<210> 294
<211> 452
<212> DNA
<213> Homo sapiens

<400> 294
aggtactcat ttaacaggcc gtgatttttc tcccgccccc tttgttgttc caaaagagtg 60
atttatatgg aagtttacac tagtgccaaa taccactgta gttaaaatga gaccagtatc 120
atggcctaat tctaacgtcc cagcagcttt gaacaatcat gatttatttt cttaaatcaa 180
atttcaactc aagctgcttg acagaagctt gtcaatacat gtgctgtatt ttttttgcat 240
ttgttgaaaa attgcacata tagaattcca aacatttctc ctggtaggtt cagttacaca 300
aatacatgtt ctatagaaca ctgagaggtt acttttgagt taagtccaca aatcttccat 360
aagttcaacc taatcagtta ccagttcaag aagatcttga aggtggtaaa ctagcaggaa 420
cttcagattt aggaaacccg cgtacctgcc cg 452

<210> 295
<211> 367
<212> DNA
<213> Homo sapiens

<400> 295
aggtacaagc agtaattgat tcactggcct tggactactt gcaggtcagc ttgcctcaca 60
taacaggttg gtatatgtat aactatcaca taattatgca ttttagtaaa aataattgtt 120
tagaactggc ttcgggcagt tgtgacctct aactgtaatt tccttgcttc ttctgtatgt 180
ttccacctct tgtgctgtgc gcctagccaa atcagggtgc tcttgataaa aattcttctc 240
aaatttaggc agctcatcaa gattccactt ctttttaact aatttctccc cagggtttcc 300
aaacttcttt ccagataagg gccctgccct acttcctcca aatcgaggtg caccaaaccc 360
tcggtcc 367

<210> 296
<211> 474
<212> DNA
<213> Homo sapiens

<400> 296

aggtactgtc caactggatg ctgccctggt ggctgaaggc acacttcatg atgctgtcca 60
gggtcatcag ggagacatgt tgaaagagct ccagacgtga gttttgggca atgtgttcct 120
cccatttgtt cagcatcatc cgaacactct cagacatcat ggtgatgaat attttcagaa 180
tgctgatgtt gaagccaggt ttcacaatct ggcggtgctt tttccattta gaaccatcca 240
gggtcacaag tcctcgacca acccaggatt caaggatttt gtggctaaca gcacttttgg 300
gatcttgtct tttcaggaga atcttggcat agtctgggtc atggacactg aagaacatcg 360
taaagggtcc aacccacaag ggaacagcac atgggtattt ttccatcagc ttatgataca 420
cctcaaactc ctttactggg taaaactcct tgtggccata gaaccagtgg gcag 474

<210> 297
<211> 537
<212> DNA
<213> Homo sapiens

<400> 297
aggtacaagt tgtctttatg ctgcgagata agtcctctct tggtttgagc tcccaccttt 60
tcagtgaact cttacatttt gggggatctg ctcttgtaaa ggacatcctt tctggtcttt 120
gattacttga gaaaagtgag tgaggtgggg ccaagatggt tgactagaag cagctagtgt 180
gtgccactct cacaaatagc agaaagagtg gtgagacact agctcttcaa ccggaacatc 240
caggtggaca cataaggatt catcagtgac atagtgtgac cttcggatca cggagaagag 300
tgagacagat caaccattca cccaggagtg gcacagaccc aggggaatcc ccctacaaga 360
aaatggtgag tgagtgagag tcccgtggga tgcatatttc tgccacgaac ctttgaatcc 420
ctgggctcag gagataccccc agctggggtc tccagaccaa aacagagagc catgtggagt 480
ctgggtagag ctgcttctta ggtaggtgtg gagtcccagt agcatttgtt ccctggg 537

<210> 298
<211> 264
<212> DNA
<213> Homo sapiens

<400> 298
tagggcgaat tggagctccc cgcggtggcg gccgcccggg caggtacgcg ggtaactttt 60
ttaactttat aaacttagta ttttaacttt ttaaactttt ttgttgaaaa ctaagacaca 120
aaaacacatg ttagcctaga tccacacagg gtcagggtca tcagtatcac tgtcttccac 180
ctccacattt tgtctctgga aggtcttcag gggcaataac acacatggag ctgtcatcgc 240
ctgtggtaac aacgcagagt acct 264

<210> 299
<211> 441
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 366, 394
<223> n = A,T,C or G

<400> 299
ccgggcaggt actgtccaac tggatgctgc cctggtggct gaaggcacac ttcatgatgc 60
tgtccagggt catcagggag acatgttgaa agagctccag acgtgagttt tgggcaatgt 120
gttcctccca tttgttcagc atcatccgaa cactctcaga catcatggtg atgaatattt 180
tcagaatgct gatgttgaag ccaggtttca caatctggcg gtgctttttc catttagaac 240
catccagggt cacaagtcct cgaccaaccc aggattcaag gattttgtgg ctaacagcac 300
tttttgggat cttgtctttt caggagaatc tcggcatagt ctgggtcatg gacactgaag 360
aacatngtaa agggccaacc cacaagggaa cagnacatgg gtatttttc catcagctta 420
tgatacacct caaactcctt t 441

<210> 300
<211> 696

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 421, 516, 557, 558, 603, 607, 616, 632, 647, 654, 666, 681, 684
<223> n = A,T,C or G

<400> 300
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atagggcgaa ttggagctcc ccgcggtggc ggccgaggta caatgttgtc tttatgctgc 60
gagataagtc ctctcttggt ttgagctccc accttttcag tgaactctta cattttgggg 120
gatctgctct tgtaaaggac atcctttctg gtctttgatt acttgagaaa agtgagtgag 180
gtggggccaa gatggttgac tagaagcagc tagtgtgtgc cactctcaca aatagcagaa 240
agagtggtga gacactagct cttcaaccgg aacatccagg tggacacata aggattcatc 300
agtgacatag tgtgaccttc ggatcacgga gaagagtgag acagatcagc cattcaccca 360
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ntgggatgca tatttctgcc acgaaccttt gaatccctgg gctcaggaga taccccagct 480
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ggtgtggaat cccagtnngc cattttgttc cccttgggta cctggccccg gggcggccgt 600
ttnttanaac ttagtnggaa tccccccccgg cntgcaagga attttcnaat atanaagcct 660
ttattngata cccggtcgaa nctngaaggg gggggg                            696
```

<210> 301
<211> 154
<212> DNA
<213> Homo sapiens

<400> 301
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aggtacacgt ctctgtctgg gcctcggcca gggtgccgag ggccagcatg gacaccagga 60
ccagggcgca gatcaccttg ttctccatgg gggccattgc ctcctctctg ctccaaaggc 120
gacccccgagt cagggatccc cgcgtacctg cccg                            154
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<210> 302
<211> 420
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 94, 125, 144, 191, 197, 223, 225, 226, 235, 238, 273, 282, 283, 288, 289, 299, 308, 309, 311, 356, 389, 391
<223> n = A,T,C or G

<400> 302
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gttaattgcn cgcttggccg ttaatcaatg ggtcataagc ttgttttcct gtggtggaaa 60
ttgttatccc gctcacaaat ttctcacacc aacnataacc gaaggccggg ggagcaataa 120
aagtngtaaa agcccctggg gggngccctt aaatggaggt ggaagcttaa acctcaacat 180
ttaaaatttg ncggttngcg gccttcaact tgccccccgct ttntnncaat tccgnggnaa 240
aacccttgtt ccgatggccc cagcctggcc aanttaaaat gnnaaatnng gcccaaacng 300
ccgccggnng naggaagggc cgggtttttg ccggtaattt ggggccgcct cctttnccgg 360
cttttccctt cggtttcacc tggacttcnt nttgcggctt cgggtcccgt ttccggcttg 420
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<210> 303
<211> 159
<212> DNA
<213> Homo sapiens

<400> 303
aggtacactc ttccttaagt ccagtggtgc aggaaagctt cagtttgtca atatcacgca 60
agacagggac accaaacact acccctgccc aaaggagccc ctcacggacg ccgccatgtt 120
gttaccggac ccgagcaccg ctccccgcgt acctgcccg 159

<210> 304
<211> 347
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 36, 93, 136, 142, 155, 171, 242, 265, 292, 293, 298,
310, 334
<223> n = A,T,C or G

<400> 304
aggtacgcgg ggacggttcg tttttccttt antcangaag gacgttggtg ttgaggttag 60
catacgtatc aaggacagta actaccatgg ctnccgaagt tttgccaaaa cctcggatgc 120
gtggccttct ggccangccg tntgcgaaat catantggct gtagtatccg ntgctatccc 180
tgggggttgc agctttgtat aagtttcgtg tcggctgatc aaagaaagaa ggcaatacgc 240
anatttctac atgaaactac gatgntcatg aaagcatttt gagcgagatg anngaagngc 300
tgggtatctn ttcaggagtg taaaggtaat cttngggaaa tataaaa 347

<210> 305
<211> 537
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 380, 381, 387, 388, 389, 400, 412, 426, 430, 452, 471, 481,
485, 495, 503, 508, 521, 523
<223> n = A,T,C or G

<400> 305
aggtacagtg gccccccgtg aaagacagaa ttgtggtttt cctggtgtca cgccctccca 60
gtgtgcaaat aagggctgct gtttcgacga caccgttcgt ggggtcccct ggtgcttcta 120
tcctaatacc atcgacgtcc ctccagaaga ggagtgtgaa ttttagacac ttctgcaggg 180
atctgcctgc atcctgacgc ggtgccgtcc ccagcacggt gattagtccc agagctcggc 240
tgccacctcc accggacacc tcagacacgc ttctgcagct gtgcctcggc tcacaacaca 300
gaattgactg ctctggactt tgaactacct caaaattggc cttaaaaatt aaaaagaaga 360
tcgatattaa aaaaaattan naaaacnnna tgaaaaaagn gtcccttgcc cngggccggc 420
ccgttnttan gaactagtgg gatcccccgg gnctgcaggg aaattccgat nttcaaactt 480
nattngaata cccgnctacc tanaaggngg ggggccccgg ntncccaagc ctttttt 537

<210> 306
<211> 666
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 37, 208, 215, 226, 228, 291, 299, 332, 362, 374, 391,
424, 445, 453, 463, 479, 483, 495, 504, 505, 512, 516, 519,
532, 556, 564, 602, 608, 616, 652, 661
<223> n = A,T,C or G

<400> 306

gganatgggg ttttgctgtg ttgcccaggc tggtctntaa ctcctgggct caagcaatcc 60
tccagcctcg gcctcccaaa gtgctgggat tacaggcgtg agccaccgca cccggccact 120
tgtttcttaa tgagtgtctg caactgctgg ggaggtgcgg gtctgccggc cagagctgca 180
ggtaagtgag ggtcaagctg gttcacanag tgcancaact cagctnanag tcctgaacac 240
acagcccagc cctttgaaac catcccctcc agcacaagga agacagcatt ntgcaaacnc 300
atccatggga gcctcaggaa aataagtttt anacaagtca cgtgttccta ccttccaggc 360
ancaaagtca gtgntacaga aagcaaagta nggggatcgc aggcctctgg ctggagggag 420
gccnccaaaa ctccctggga ttagnatttc ggntgactct aangccatca ggggtttanc 480
tcnacaccta aaagnctact ctgnnggatt cnaaancana cagttacctt gnccggggcg 540
ggccgggttt aaaaantaag tggnatcccc ccggggcctt gggagggaaa tttccaatat 600
tnaaagcntt tttcanatac ccgtcaaccc tcgagggggg ggggccccgg gnaccccсaa 660
nctttt 666

<210> 307
<211> 701
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 483, 546, 645, 661, 685, 693
<223> n = A,T,C or G

<400> 307
aggtacaaag tgggagctgg cactgggcag atctggctgg ataatgttca gtgtcggggc 60
acggagagta cccggagcac ggagatctcg ccggctttac gttcacctcg gtgtctgcag 120
caccctccgc ttcctctcct aggcgacgag acccagtggc tagaagttca ccatgtctat 180
tctcaagatc catgccaggg agatctttga ctctcgcggg aatcccactg ttgaggttga 240
tctcttcacc tcaaaaggtc tcttcagagc tgctgtgccc agtggtgctt caactggtat 300
ctatggggcc ctagagctcc gggacaatga taagactcgc tatatgggga agggtgtctc 360
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cgtcacagaa caagagaaga ttgacaaact gatgatcgag atggatggaa cagaaaataa 480
atntaagttt ggtgcgaacc gccattctgg gggtgtccct tgccgcctgc aaagctggtg 540
ccgttngaga agggggtccc cctgtaccct gcccggggcg gccgctctaa gaactaggtg 600
ggatcccccg ggcctggcaa gggaatttcg atatcaaagc ctttntcgga tacccggcg 660
nccctcggag ggggggggcc cgggnacccc canctttttg g 701

<210> 308
<211> 235
<212> DNA
<213> Homo sapiens

<400> 308
aggtactgag cgcgcgaggc tctacagagt gaaggtttaa atccaaggtc atggcaaaac 60
atctgaagtt catcgccagg actgtgatgg tacgcggggg actcggggtc gcctttggag 120
cagagaggag gcaatggcca ccatggagaa caaggtgatc tgcgccctgg tcctggtgtc 180
catgctggcc ctcggcaccc tggccgaggc ccagacagag acgtgtacct gcccg 235

<210> 309
<211> 555
<212> DNA
<213> Homo sapiens

<400> 309
agtggaaaag gctattgccc actatgaaca gcagatgggc cagaaggtgc agctgcccac 60
ggaaaccctc caggagctgc tggacctgca cagggacagt gagagagagg ccattgaagt 120
cttcatgaag aactctttca aggatgtgga ccaaatgttc cagaggaaat taggggccca 180
gttggaagca aggcgagatg acttttgtaa gcagaattcc aaagcatcat cagattgttg 240
catggcttta cttcaggata tatttggccc tttagaagag gatgtcaagc agggaacatt 300

ttctaaacca ggaggttacc gtctctttac tcagaagctg caggagctga agaataagta 360
cctgcccggg cggccgaggt accgagcatg aacatctgca gcctcttgca gaatcacccc 420
agaaggggac tgaatcatgg tcctcttgat aggtatgttc agcagagttt ccagtcctga 480
ggtgtatgag gccagctgga gctcataatc cttaattgaa ttggcgcaaa gttcagcaat 540
tttttgtcct gcccg 555

<210> 310
<211> 642
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 537, 572, 608, 611, 620, 629, 630
<223> n = A,T,C or G

<400> 310
agtggaaaag gctattgccc actatgaaca gcagatgggc cagaaggtgc agctgcccac 60
ggaaaccctc caggagctgc tggacctgca cagggacagt gagagagagg ccattgaagt 120
cttcatgaag aactctttca aggatgtgga ccaaatgttc cagaggaaat taggggccca 180
gttggaagca aggcgagatg actttgtaa gcagaattcc aaagcatcat cagattgttg 240
catggcttta cttcaggata tatttggccc tttagaagag gatgtcaagc agggaacatt 300
ttctaaacca ggaggttacc gtctctttac tcagaagctg caggagctga agaataagta 360
cctgcccggg cggccgaggt accgagcatg aacatctgca gcctcttgca gaatcacccc 420
agaaggggac tgaatcatgg tcctcttgat aggtatgttc aagcagagtt tccagtcctg 480
aggtgtatga ggccagctgg agctcataat ccttaattga attggcgcaa agttcancaa 540
ttttttgtac ctgcccgggc ggccgcttct anaactagtg gatccccccg gcttgcaggg 600
aattcganat naagcttatn gataccgtnn actttagggg gg 642

<210> 311
<211> 714
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 589, 656
<223> n = A,T,C or G

<400> 311
aggtaccagc agaccccagg ccagtctcca cgcacactca ttttcagcac aaacactcgc 60
tcttctgggg tccctgatcg cttctctggc tccatccttg ggaacaaagc tgccctcacc 120
atcacggggg cccgggcaga tgatgaatct gagtattact gtgcgctgta tatgggtagt 180
ggcatttggg tgttcggcgg agggaccaag ctgaccgtcc taggtcagcc caaggctgcc 240
ccctcggtca ctctgttccc gccctcctct gaggagcttc aagccaacaa ggccacactg 300
gtgtgtctca taagtgactt ctacccggga gccgtgacaa gtggcctgga aggcagatag 360
cagccccgtc aaggcgggag tggagaccac cacaccctcc aaacaaaagc aacaacaagt 420
acctgcccgg gcggccgctc gacccgggca ggtacgcggg ggggcaaaaa aatcaaggta 480
tttggtcccg gaacaaagct tatcattaca gataaacaac ttgatgcaag atgtttcccc 540
caacccacta tttttctttc ctttcaattg ctgaaaacaa aagctccang aaggctggga 600
acatacctttt tgtctttctt tggagaaaat tttttcccct tgatgtttat ttaagnatac 660
atttgggcaa agaaaaagga aagagccaac cacggattct tggggatccc aagg 714

<210> 312
<211> 268
<212> DNA
<213> Homo sapiens

<400> 312

gcattgaatc aacctcagcc accatctgct tttaacagcc aggagaaacc agtagtagcc 60
agcagatcgc gcctaccaac cagtttcacc aactagcagg taactccggg tttccaatct 120
gtccatccag ggaggaagaa atgcaggaaa tgaaagatgc atgcacgatg gtatactcct 180
cagccatcaa acttctggac agcaggtcac ttccagcaag gtggagaaag ccaatcacac 240
atcaagagat gaagacactg cagtacct 268

<210> 313
<211> 229
<212> DNA
<213> Homo sapiens

<400> 313
ccgggcaggt acgcggggta actttttaac tttataaact tagtatttta actttttaaa 60
ctttttttgtt gaaaactaag acacaaaaac acatgttagc ctagatccac acagggtcag 120
ggtcatcagt atcactgtct tccacctcca cattttgtct ctggaaggtc ttcaggggca 180
ataacacaca tggagctgtc atcgcctgtg gtaacaacgc agagtacct 229

<210> 314
<211> 204
<212> DNA
<213> Homo sapiens

<400> 314
aggtacgcgg ggacaccaaa caactcatta cacaaagagg taaggtccca gaccacgcca 60
aagcttcctg agacctctcc tcatctgtgc atggacggat gaccaactct ggggcccagg 120
ctgttgcttc ccagtataat gatgaatccg ccatagtctg gtgagtgtag aggctgactc 180
tggagcccaa gctgtacctg cccg 204

<210> 315
<211> 386
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 330, 378
<223> n = A,T,C or G

<400> 315
ccgggcaggt accactcttt accaaactgc taaaggaatc gaaaccttct ccagaggtca 60
aatggtcagg aattcgagta aggcacactc tcaaatcctt agtaaggcca aatatctttt 120
taaattcagc atcactcttc agatgtaatg ccttattact tcttccttga gaatcttttct 180
tgtcatttct tccttgggca cctttatctg atgttgatgc catctcatta tggatctttg 240
gttcttggtc tctaaaaaca cactgttgtg aagtaacagt tgttgcatca acagaggaac 300
ttattttctc tatgctctgg aggacacttn cttttctagc ataaatgacg gctgttactt 360
ttctgggggc attgtgtnct gtacct 386

<210> 316
<211> 668
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 383, 418, 487, 589, 597, 631, 650, 660
<223> n = A,T,C or G

<400> 316
ccgggcaggt acccagggaa caaatgctac tgggactcca cacctaccta agaagcagct 60

ctacccagac tccacatggc tctctgtttt ggtctggaga ccccagctgg ggtatctcct 120
gagcccaggg attcaaaggt tcgtggcaga aatatgcatc ccacgggact ctcactcact 180
caccattttc ttgtaggggg attcccctgg gtctgtgcca ctcctgggtg aatggctgat 240
ctgtctcact cttctccgta atccaaaggt cacactatgt cactgatgaa tccttatgtg 300
tccacctgga tgttccggtt gaagagctag tgtctcacca ctctttctgc tatttgtgag 360
agtggcacac actaagctgc ttntagtcaa ccatcttggc cccacctcac tccttttntt 420
caagtaatca aagaccagaa aggatgtcct tttacaaagg agcagatccc cccaaaatgt 480
taagaanttc acttgaaaaa ggtggggaag ctcaaaccaa agagagggac tttatcttcg 540
caagccatta aagacaacct ttgtaccttc gggccgctct aagaactang tgggatnccc 600
ccggggcctg cagggaattc gattatcaaa nctttatcgg aatacccggn cgaaccttcn 660
aagggggg 668

<210> 317
<211> 644
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 143, 322, 367, 382, 393, 398, 404, 407, 411, 439, 446, 491,
529, 531, 552, 580, 581, 589, 630, 633
<223> n = A,T,C or G

<400> 317
ccgggcaggt acccatggga gatggactgg cttgttcttt gggtcaactg cagcttattg 60
gaggtgttga tatggcactt agggtctttg ctcccttgat atatcttctg agggtagcaa 120
gggcaattct actgcagagg cantggcaga aaggatttca tttgctcctg gaagctctgt 180
ccaaaaaact gctgagttgc tactggcttg atagctccgg tggtgggctg gctagagacc 240
caggccagga ggacctgccc atcaagtaga gtccggtcaa ttttctgtag ggctgctgtg 300
gtatgctggg gggtccctcc antcccctaa ttgcctcata ttttttccca ggggaagaat 360
gatagcnctg ccccctttc tnttgggaag ctnttgtncc ttcnggnccg ncccgggcca 420
gggttacttt tttttttant ttgacnagga gggaacaatg ccctttttaaa aaaatatttt 480
taattggggt ngaaaacttt tcttaattct caaggaaaac cttttgggnt ncttttaata 540
taaatttaat tnatgctctt taaaaatttc tgtttggatn naaaagcant tggtattatt 600
attaaaatac cctgttaaaa gaaaaaatan tanttttttaa aaat 644

<210> 318
<211> 229
<212> DNA
<213> Homo sapiens

<400> 318
ccgggcaggt acgcggggta actttttaac tttataaact tagtatttta actttttaaa 60
ctttttttgtt gaaaactaag acacaaaaac acatgttagc ctagatccac acagggtcag 120
ggtcatcagt atcactgtct tccacctcca cattttgtct ctggaaggtc ttcaggggca 180
ataacacaca tggagctgtc atcgcctgtg gtaacaacgc agagtacct 229

<210> 319
<211> 303
<212> DNA
<213> Homo sapiens

<400> 319
ccgcggtggc ggccgaggta caagccttga acatcgtcct gcttcccagt gggttcagac 60
ctcacctctc agggagcgac ctgggcaaag acagagaagc tcccagaagg agagattgat 120
ccatgtctgt ttgtaggacg gagaaaccgc ttgggtaact tgttcaagat atgatgcatg 180
ttgctttcta agaaagccct gtattttgtg attgcctttt ttttttttaa gatgctttca 240
ttttgccaaa ataaaacaga taatgtggat ggtttaaggg ttatagtatt atagtttaaa 300
taa 303

<210> 320
<211> 680
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 313, 394, 419, 441, 446, 471, 478, 480, 482, 505, 510, 512, 517, 540, 541, 544, 554, 556, 559, 561, 562, 567, 597, 602, 613, 614, 615, 618, 619, 635, 641, 643, 646, 647, 648, 654, 656, 670
<223> n = A,T,C or G

<400> 320
aggtacgcgg gtaaacttgg catttccaaa ggagtaatgc ccccatcttg tatgtaactc 60
caactcaaag gaacaaaaga gagggccaat tttatatgaa gttttattct caaaatataa 120
aaaaaaaaac aaaaacccca cacaccaagg gactaagatg atgttatttc acagcacttg 180
cttgcctcag tctttacgaa gaacacaatt ccaaactaat ggacaagttc ctccctgtgc 240
tctaggtcat tcaaaggagg caagctcctt ttgtcaaatc aggagctcca tcagctgatc 300
aggagcccag atnccaggtg ggatttttct cagtgggatc tagtattgct agaagagcct 360
tccttacatg gcaagaaaca ggcacatggg cctntttcct ttagaatgca tcttgtctna 420
catgctttgg ggactgcttg ngccangaac caccttggtg ttggcctggc naaggcancn 480
tnttacatgg gccccccaa aaacntgggn cntggcnatt tttttttccc ggctttttn 540
ncangccccc cttnanggna nnaagcnccc attgccactt ggtggggctt ggggtanttt 600
tnccgggaat tcnnnttnnt ttctccccgc aaaanaaaaa nantcnnngg aaantncggg 660
tttttttttn aggggggaaaa 680

<210> 321
<211> 229
<212> DNA
<213> Homo sapiens

<400> 321
ccgggcaggt acgcggggta actttttaac tttataaact tagtatttta actttttaaa 60
cttttttgtt gaaaactaag acacaaaaac acatgttagc ctagatccac acagggtcag 120
ggtcatcagt atcactgtct tccacctcca cattttgtct ctggaaggtc ttcaggggca 180
ataacacaca tggagctgtc atcgcctgtg gtaacaacgc agagtacct 229

<210> 322
<211> 263
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 63, 71, 90, 145, 169, 198, 222, 223, 241
<223> n = A,T,C or G

<400> 322
cccataatgg ctatttattg gatcagcaat ttataagtcc cacattctca tgccacatag 60
ctntacacag ntgcaaaaat ataccatagn ttgcagggga tcattggttt gataaaagat 120
attgagtcgc tcattttgtg aaagngacct ttgatataag aggagcatna cgcggggaaa 180
gctcacatgt cccgtggntc acacaccaga aggtatttgc gnnttgtcat tgctgtctgg 240
naggccatgg caatggcttt ttt 263

<210> 323
<211> 319
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 61, 64, 76, 77, 86, 93, 99, 118, 124, 144, 163, 219, 220,
253, 264, 266, 274, 290, 303
<223> n = A,T,C or G

<400> 323
ccacacacag gacacacaca aatgcatgcc ccatgatcgc actcaggaaa aaacccacgg 60
nctnccatat ggctgnnaac aaactntagt ttntaccant cctgatggtg agcacganta 120
tgtngaaaga agcaggcaca gcanaagagt tcgttgtgct cgnggtcatg taaatgttgt 180
atctggtgaa ggtgggtcat tgttacatga ctgaattgnn tcccttcaaa attcataggc 240
tgaagcccta gtnaccgttt ttgnanacag ggtnttttag gaggttattn aggctaaatg 300
aantcttaag gggggggccc 319

<210> 324
<211> 713
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 365, 421, 426, 434, 454, 457, 473, 520, 550, 559, 562, 566,
579, 584, 591, 593, 606, 614, 622, 652, 659, 662, 663, 664,
678, 685, 694, 699
<223> n = A,T,C or G

<400> 324
ccgggcaggt acccagggaa caaatgctac tgggactcca cacctaccta agaagcagct 60
ctacccagac tccacatggc tctctgtttt ggtctggaga ccccagctgg ggtatctcct 120
gagcccaggg attcaaaggt tcgtggcaga aatatgcatc ccacgggact ctcactcact 180
caccattttc ttgtaggggg attcccctgg gtctgtgcca ctcctgggtg aatggctgat 240
ctgtctcact cttctccgtg atccgaaggt cacactatgt cactgatgaa tccttatgtg 300
tccacctgga tgttccggtt gaagagctaa gtgtctcacc acttctttct gctatttgtg 360
agagngggca cacactagct tgcttcttag tcaaccatct tgggccccac ctcaccttaa 420
nttttnttca agtnattcaa aagacccaaa aaanggntgt cccttttaca aanaagccag 480
aatcccccca aaaaatgtaa agaagttcac tggaaaaaan ggtggggaag ccttcaaacc 540
caaggagaan ggacctttnt tntttnccag cattaaaang accnactttg ngncctccgg 600
ggccgncttc ttanaaactt angtgggaat cccccccggg ccttggaagg gnaatttcng 660
annnttccaa gcctttantc gaatnccccgg ccgnacccnt gagggggggg ggc 713

<210> 325
<211> 156
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 12, 19, 31, 32, 33, 37, 57, 65, 69, 80, 88, 91, 98, 102,
106, 133, 154
<223> n = A,T,C or G

<400> 325
aggtactgan anaaaaatnt gctctgtggg nnnagcntat ccagtccaca gcccctntct 60
tggtnattna taaagacaan gatctgcnct nagggatncc tnagcnattc tccaatctcc 120
atctcacggt acnacaatca ccttgaccat cagngg 156

<210> 326

<211> 536
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 411
<223> n = A,T,C or G

<400> 326
ccgggcaggt accactttta tcacatgcag ctgccttaac caacaggttt tctaagatac 60
tatccccctt acctgtttct gcctctttca atggtgtttt tccattttta cagacttctg 120
aaaattttag ctttcattga aataagcttc cccattcctt catgttaata tatctagcaa 180
tattgaatag aaattataaa tggaaataaa aatgcttgct tttataaaat ctccagtctc 240
gcagcacccc caatataata caaacagact taagttgaaa tttggtttgt taatgcccac 300
cttgtgtggt caaaacacag ttttgaagga atgaccacct tcaatgttct ttacagcttc 360
tttagtgtta cttaaaaaaa aaaaatcaat ctgatggatg attgatggta ngtttgttca 420
tggaagatct tcatcttatg ggaattatct agtttttcta atcatatact accaacaaaa 480
ataaacacaa gcgtgttccc tttaatcata ttatcctcca ccattacttc caaaag 536

<210> 327
<211> 505
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 18, 24, 27, 29, 35, 43, 45, 46, 51, 54, 65, 67, 70, 82,
83, 90, 92, 94, 101, 108, 135, 137, 138, 139, 142, 151,
152, 156, 161, 168, 172, 180, 200, 257, 296, 299, 306, 319,
360, 365, 367, 378, 382, 397, 400, 409, 417, 420, 425
<223> n = A,T,C or G

<221> misc_feature
<222> 437, 448, 451, 459, 468, 497
<223> n = A,T,C or G

<400> 327
ccgcggtggc ggccgncngg ccangtncna ctaanatctt cantnnacta ncangataaa 60
caggncnatn aataactgag gnnaagcccn antngcaagg ncacacanga aagaatcaga 120
ccacgaaatg agctncnnnt gncacctgca nngggngcac natgaggntt tntgaactcn 180
atgagctacc gagccacggn ttctcgatgt agcactctta ttagtgtcgc cctgcggcgc 240
cggtctacaa gcgacgnggt ctgttttatc cattatacca caggggaagg gaccgnttna 300
gtgctncgaa ggttatacnc agtactgtaa tccacaggca caagaccacc tactcattgn 360
gcatncncca agctctcntg gnccagaaca ccttctnagn atgctatgng ggcattnctn 420
gcgcncaagc tcggtanggg aaataaanat ntattattng gcctttantc caattaccct 480
ggccttaatc cctctgnggg ggggg 505

<210> 328
<211> 414
<212> DNA
<213> Homo sapiens

<400> 328
ccgcggtggc ggcccgaggt acaaagtgat caaacctgtc tattaattaa gcaaatgagt 60
ggtgaatcac tgagacggct ggatggctga gctgagggat gtgatgtgtg cccaacgtcc 120
tgcagggtgc tggtgaataa catgagaaag aacttaaaat ggcttgatga tctcaccatt 180
tagtgacctt ggttgtcaca ctgctttcca agagcccttt aaaggtagga atgagagctg 240
tttccagtat gcattccaat aggaatgcag ctttgctaaa gttagagaca taaactaaaa 300

ccctgtgaag tcctatagag cccttggact tatttcctag caagcattta tcatccccac 360
catcctctac ttcaggacac ccgcgtacct gcccgggcgg ccgctctaga acta 414

<210> 329
<211> 610
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 499, 505, 600
<223> n = A,T,C or G

<400> 329
tcctataggg cgaattggag ctccccgcgg tggcggccgc ccgggcaggt actaatcatc 60
ctgtcccaac aaccatccaa tccacacccc atctactccc acaacttttg taagcaaata 120
acagcccaac gttttatcca caaatgtttc cgtatgtatt tctaaaagat aaggcctttt 180
tcttaaacta cccacatcgt cacactcgaa aaaaagtagt gactgcttga tattagatat 240
tcaattacgt taaaatttcc aattatctca caaatgccgc acatttaaaa attttttttta 300
ttcaatcaca aatcatgtcc atattataga acattgggat ttgaactcag gcctgcttcc 360
aaaacttgta tactgccaac tttgtcatgc tataagaatg catgcatgga gagagacaag 420
acagaaataa agcctttctt gtcctttaaa tgtcctgctc tgcagtagga attgtaaggt 480
aggtaagtaa atagatgtnc tgaangctac ctctgacctt ttaaaatctt tgacatagat 540
aggttgagaa ggcagcaata tacctttaac caaactaact accaaaggaa atttggaaan 600
gggcaccaga 610

<210> 330
<211> 230
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 135, 159, 166, 170, 176, 195, 201, 203, 207, 210, 213, 214, 217, 226
<223> n = A,T,C or G

<400> 330
aggtactgcc tgcctctagt gtcgcgtccc tccagtatcc gatgggagcg ccgtccgcag 60
ggaatgtgtc tctctgatca tggtgtctcg tgtccaactc tgggggaaga ccgagacaaa 120
tcgagtcact ggtgntggga aaaggcttat ttccgcttnc gcttgnccan tttcangaat 180
ttgattctga gagcngggct ncngttncan gcnnggnttg tacctncccg 230

<210> 331
<211> 244
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 30, 37, 51, 52, 56, 57, 59, 62, 74, 77, 79, 80, 84, 86, 87, 89, 92, 97, 99, 117, 126, 127, 134, 140, 141, 144, 150, 151, 156, 159, 161, 164, 167, 172, 177, 180, 195, 198, 199, 200, 202, 208, 212, 221
<223> n = A,T,C or G

<400> 331
cggcggccgc ccgggcaggt tnacatggtn cggcttnaat actcccagtt nntganncng 60
cncacaagcc ctgngancnn ggcnanntnc cnatatncng agactgacag ggcttantaa 120

gaaccnnccc atcngacatn nganggagan naaggngcng nacnagnccg cngaaanaan 180
catacccctga gaatnccnnn cnaccaanag gnatttgagc ngcctgtttg atgtaagaaa 240
agga 244

<210> 332
<211> 208
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 39, 48, 52, 57, 61, 76, 79, 82, 92, 93, 96, 97, 98, 103,
104, 109, 119, 133, 135, 136, 139, 146, 151, 152, 154, 156,
159, 161, 171, 173, 183, 191
<223> n = A,T,C or G

<400> 332
tatcggcgaa ttgtagctcc ccgcggtggc ggccgnccng ccatgtangc tngatancct 60
ncaacccaga aagatntant tncgcgagca cnnctnnngc canntagcna gacattttna 120
cccgaatgcc gtnannttna ggaatnccct nntncngant nttttgcttc ntnccacccc 180
tangggggaaa nactgctttg tgctttgg 208

<210> 333
<211> 241
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 22, 28, 57, 65, 123, 183, 230
<223> n = A,T,C or G

<400> 333
gcnccactgc actccagcct gngtgacnga tcaagactct gtcttaaaaa aagaaanaaa 60
ataangtgaa tatcagtatt gcttgaaaat tcctagaata tttggataaa actttaaatg 120
aanacatgaa taactgactt tgggaactgt aattgtacca aattttgttt ttccaaaaac 180
aanaaagtaa ccttggttcc caatacaacc agaattttga tattccttgn actgcatgcc 240
t 241

<210> 334
<211> 187
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 63, 71, 79, 100, 125, 128, 134, 144, 151, 163, 164, 169,
178
<223> n = A,T,C or G

<400> 334
ctgtctcact gactgnggat gaggatggga ggtcagctac tcactggttt tcactgacat 60
tangggtata nggaaccana gtgctgacta gccctgactn gctctactgt attcaatctc 120
attgntgnca ggtntatatg gggngtgagt ntatcataac acnnactanc actacctnac 180
actacca 187

<210> 335
<211> 138
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 12, 20, 31, 32, 33, 36, 40, 45, 55, 61, 62, 65, 77, 84, 95, 98, 103, 126, 130
<223> n = A,T,C or G

<400> 335
aggtacccgg gnacctgatn catttctacc nnnctntagn agaancacat cttantggtg 60
nnatncgtct gttcttnctc acgnatgccg ccccnacnag gcntgacaga ccatactagg 120
ccatangcan cgacttgt 138

<210> 336
<211> 242
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 67, 68, 71, 72, 73, 74, 78, 79, 86, 95, 97, 99, 102, 103, 104, 106, 108, 109, 111, 112, 113, 117, 120, 125, 131, 132, 151, 154, 155, 156, 157, 158, 162, 170, 172, 175, 192, 193, 197, 198, 205, 208, 210, 212, 213, 217
<223> n = A,T,C or G

<400> 336
tggagctccc cgcggtggcg gccgcccggg caggtacttn cttttttttt tttttttttt 60
ttaaaanncc nnnnaaanng gggatncccc ggggnananc cnnngncnna nnngagnaan 120
aaggnggtaa nnaaaaaagg ctccctgaat naannnnntt tngccctatn anggnggttt 180
tttattgccc cnnggcnnga atatnccncn cnnaaanggc cccccgcttt tttttttttt 240
tt 242

<210> 337
<211> 337
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 18, 20, 21, 37, 38, 41, 44, 49, 51, 52, 58, 66, 69, 70, 72, 80, 86, 89, 96, 97, 103, 106, 111, 112, 117, 121, 122, 124, 129, 132, 134, 136, 137, 139, 155, 159, 163, 164, 166, 167, 169, 184, 188, 189, 190, 193, 198, 200, 205, 217
<223> n = A,T,C or G

<221> misc_feature
<222> 220, 221, 223, 224, 225, 226, 229, 234, 236, 237, 248, 253, 258, 259, 263, 264, 268, 269, 270, 271, 272, 279, 280, 285, 289, 291, 302, 305
<223> n = A,T,C or G

<400> 337
acgtaccagg atntacantn naaccatctt ttccggnnag nccncaagna nnagctgngc 60
ccctangann anaaagaccn acgganccng gggcannttg atnacnatgg nnaccanccc 120
nngngtacnt gncngnncng acgttttaaa actanaggnt tcnncnntnt gaaggaattg 180
gatntcannn ttnttganan cgttnacttc taagggnggn ncnnnnccna cttntnnttc 240
cctttagnaa tgnttaanng canncttnnn nnaataatnn tcatncttnt naactgggtc 300
anganatttt gccgtatgaa catcacagag tgtacct 337

<210> 338
<211> 663
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 88, 116, 176, 193, 314, 317, 327, 336, 344, 353, 382, 410,
416, 423, 426, 429, 430, 432, 438, 459, 462, 463, 480, 487,
488, 490, 494, 502, 504, 505, 513, 516, 517, 518, 519, 527,
534, 535, 537, 538, 549, 550, 554, 562, 573, 574, 590
<223> n = A,T,C or G

<221> misc_feature
<222> 591, 593, 598, 604, 608, 616, 638, 639, 640, 649
<223> n = A,T,C or G

<400> 338
aattggagct ccccgcggtg gcggccgagg tacagtggcc ccccgtgaaa gacagaattg 60
tggttttcct ggtgtcacgc cctcccantg tgcaaataag ggctgctgtt tcgacnacac 120
cgttcgtggg gtcccctggt gcttctatcc taataccatc gacgtccctc cagaanagga 180
gtgtgaattt tanacacttc tgcagggatc tgcctgcatc ctgacgcggt gccgtcccca 240
gcacgatgat tagtcccaga gctcggctgc cacctccacc ggacacctca gacacgcttc 300
tgcaactgtg cctnggntac aacacanatt gactgntctg actntgacta ctnaaaattg 360
gcctaaaaat taaaagagat cnatctaaaa aaaaaaaaaa aaaaaaaaan ttcctncccc 420
ggncgnccnn gnaaaaancc gggttttttt attcccctna annggaaatg aaaaaatttn 480
gcctttnncn tccnaatttg gncnntttat ttnccnnnng aactttnttt aaanngnnac 540
tttttccnn tttnaaaaaa angggttggg ggnncccccc ggccattttn ncngccantt 600
cccntttnga gaaaanaaaa aatttttttt tttccccnnn gaaacaaanc ccttaaaaaa 660
aat 663

<210> 339
<211> 368
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 67, 69, 76, 79, 80, 82, 87, 91, 93, 94, 103, 104, 105, 106,
108, 110, 114, 116, 123, 135, 136, 138, 141, 143, 146, 149,
150, 156, 158, 159, 163, 164, 174, 175, 177, 179, 180, 182,
187, 188, 189, 190, 194, 195, 200, 213, 214, 215, 222
<223> n = A,T,C or G

<221> misc_feature
<222> 223, 224, 225, 228, 229, 244, 245, 255, 257, 265, 267, 268,
274, 279, 281, 283, 284, 290, 294, 295, 300, 301, 307, 313,
316, 326, 327, 328, 330, 332, 333, 336, 337, 338, 340, 342,
343, 344, 354, 355, 357, 368
<223> n = A,T,C or G

<400> 339
tggagctccc cgcggtggcg gccgcccggg caggtacttt cttttttttt tttttttttt 60
ttttaananc cgcagntcnn tnttatncct ncnnaaaaaa aannnntntn cctntngcca 120
ttntttaaaa aaacnntnac ntnttnttnn aaaaanannt ttnntttaaa aaanntngnn 180
cnaaatnnnn tttnnggggn aaaaaaaaaa aannnttttt gnnnnctnnt tttttaaaaa 240
aaannttttt ttttntnacc caaangnngg cgtntttant ntnncccccn ttcnnaatgn 300
nattttnaaa aanagntatc ccccgnnncn gnngannntn annnaaaatt tttnnanccc 360

cccccccn 368

<210> 340
<211> 234
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 30, 49, 59, 84, 92, 106, 113, 121, 127, 137, 177, 219
<223> n = A,T,C or G

<400> 340
atctncatta gggctatcat tcctatccan attcccacag gctcacagnt aagctactnc 60
aacagctgtt gctgactaaa tatnctcatg tntctaaata attatntaaa tanggaacag 120
nggattnata cctgatncct ctacattaaa aaatatttct ttcattatta catcaanagt 180
aaaatatata aaacattctg cctcaatttc aaggtcttna ttaagttggt acct 234

<210> 341
<211> 665
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 33, 53, 54, 55, 71, 72, 76, 77, 79, 80, 83, 92, 93, 96,
97, 100, 101, 103, 112, 118, 121, 125, 131, 132, 133, 134,
135, 136, 137, 141, 142, 143, 150, 152, 160, 163, 165, 169,
170, 171, 174, 175, 177, 180, 191, 192, 205, 206, 207
<223> n = A,T,C or G

<221> misc_feature
<222> 217, 224, 225, 226, 227, 228, 229, 230, 232, 236, 239, 244,
245, 250, 251, 252, 253, 254, 263, 266, 267, 275, 288, 289,
294, 300, 301, 304, 306, 309, 316, 317, 320, 321, 327, 330,
342, 351, 362, 363, 365, 366, 367, 368, 369, 370, 373
<223> n = A,T,C or G

<221> misc_feature
<222> 374, 375, 380, 382, 383, 385, 393, 394, 395, 396, 397, 398,
400, 401, 402, 403, 405, 414, 415, 420, 426, 441, 443, 453,
455, 458, 467, 480, 481, 482, 484, 486, 489, 509, 513, 520,
522, 528, 529, 530, 539, 544, 546, 548, 550, 559, 564
<223> n = A,T,C or G

<221> misc_feature
<222> 575, 592, 596, 597, 606, 610, 623, 633, 634, 635, 639, 643,
649, 659
<223> n = A,T,C or G

<400> 341
aggtacttta tttttttttt tttttttttt cnnttttaaa aaaaaaaggg ggnnnttttt 60
ttaaaaaaaa nngggnncnn ttnccaaaaa anntttnntgn ntnccccccc cnttttcnaa 120
ngggnatttt nnnnnnnggg nnncccccan gntttttttn ttngnattnn naanntngtn 180
ttccccccatt nnttttttttt tttannnccc ccttttnaaa aaannnnnnn gngaanccnt 240
tttnngcccn nnnnaaaaat ttnaanntttt ttaanccccct taaaaaannc cccnttttttn 300
nggngnccnc ctcccnnttn nattttnaan attttttttt tnaagggggg nggattttttt 360
tnnannnnnn ttnnnccccn anngnccttа aannnnnntn nnntnccccc cccnntcccn 420
gggggntttt tttcaaaaaa ntnttttttt ttnanccntt tttgggnccc cgcccccccn 480

nntnanccnt tttttttttt ttttaaaant ggncaaaaan tnacactnnn ttttttttnc 540
caananancn atttggggna accnccccgg gggcntaaag ccccgggggg gntttnnggc 600
cccccncccn gggttttttt ttngggggc ccnnntctnt ttnaaaaanc caaaaaaant 660
ttttt 665

<210> 342
<211> 629
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 88, 92, 131, 152, 160, 165, 166, 177, 181, 197, 201, 206,
208, 210, 220, 247, 261, 268, 277, 278, 304, 307, 312, 313,
318, 321, 324, 329, 330, 332, 335, 336, 338, 345, 347, 349,
352, 360, 365, 371, 384, 386, 388, 399, 404, 408, 411
<223> n = A,T,C or G

<221> misc_feature
<222> 413, 417, 421, 434, 440, 446, 449, 451, 453, 467, 475, 479,
489, 490, 494, 496, 498, 519, 556, 559, 561, 564, 580, 591
<223> n = A,T,C or G

<400> 342
acgaggtacc gcgggtcagg aaggtgaggg cgagacccct acccccacag agagcagcag 60
ccatggggaa gggcaaaacc ccaaaacnct antggaagaa aagccctatc tgtgccccga 120
gtgtggagcc ngcttcacag aagttcgcaa gnccctactn tttcnnatag ggaagcnttg 180
nccaccccca gggttgntct nccctngngn aaaaatgggn gttcttggta gaaactcaag 240
gagggcncct tctgctcttt nctctccngg aagtagnnga aaaccaactt gggaattttt 300
tttntgnccc cnncaaanaa naanaaatnn tntcnncngg ggggngnana angggggggan 360
ggganttata nccccccctta ttcnananaa ttgggttang gctngggnga ngnttgngga 420
ngtggaaaga atanaagtan accccnctng ngngaaaaaa aaaatantta ggttngtcnt 480
ttttttacnn tacnangntt gtaattgtaa ggtaaaaanc cccctattt aaagaaaatt 540
tggtcttggg ctgggnggna nagnctacct ttaattaaan gggccagttt nttaggaaaa 600
aaaacctgtg ttgggtgttt taagaaaaa 629

<210> 343
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 226, 267, 366, 381, 431, 456, 463, 486, 530, 558, 560,
579, 581, 585, 590
<223> n = A,T,C or G

<400> 343
aggtactttt tttttttttt tttttttttt nggaaggttc tcaggtcttt atttgctctc 60
tcaaattcca ggaattgact tatttaatta atccatcaac ctctcatagc aaatatttga 120
gaaaacaaat tgatattcag attcttattt tcagcaggga agtaagaagt tgcagctcag 180
tgcacataaa gtttgagaca gagatggaga catccagccc cacctntctg gaacaagaaa 240
gatgactggg gaggaaacac aggtcancat gggaacaggg gtcacagtgg acacaaggtt 300
gggctgtctc cccacctcct cacattaggc ttacagggac gcagacacat tcaggtgcct 360
ttgcanaaag agatgccaga ngctcttgaa agtcacaaag gggaggcgtg aagaaatcct 420
gcatctcagt nccttcacaa agacaacttg gtttangctt ttnaagcttg tgaggagaca 480
cacccngcgt taccctgccc cgggccggcc gcttttaaaa actagtgggn tccccccggg 540
ctgcaaggaa tttcgatntn aaactttatt gattccggnc naccnttgan gggggggggcc 600
cgggtacccc aactttttgt 620

<210> 344
<211> 804
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 58, 59, 63, 64, 66, 75, 76, 82, 83, 84, 89, 93, 94, 95, 96, 99, 100, 101, 105, 107, 108, 114, 119, 120, 137, 140, 141, 142, 146, 150, 152, 153, 154, 157, 161, 162, 167, 168, 172, 173, 177, 178, 185, 189, 196, 197, 203, 206, 208, 209
<223> n = A,T,C or G

<221> misc_feature
<222> 212, 213, 214, 215, 220, 221, 222, 228, 229, 230, 234, 237, 239, 245, 255, 259, 261, 266, 268, 269, 276, 278, 281, 284, 285, 296, 297, 299, 301, 304, 305, 306, 313, 317, 320, 323, 326, 336, 337, 340, 342, 343, 344, 346, 347, 354, 374
<223> n = A,T,C or G

<221> misc_feature
<222> 379, 387, 389, 400, 408, 422, 428, 437, 441, 448, 451, 456, 467, 489, 490, 496, 502, 519, 523, 526, 552, 575, 576, 587, 601, 608, 636, 638, 647, 653, 659, 669, 671, 679, 690, 699, 724, 732, 735, 742, 749, 765, 768, 780, 790, 798
<223> n = A,T,C or G

<400> 344
aattggagct ccccgcggtg ggcggcccga ggtacttttt tttttttttt ttttttttnnc 60
ccnncntttc ccggnnaaaa annnttgant tcnnnntann naaanannac gttnttcann 120
gggggaaaaa aaggccncan nngggngggn gnnnacnatg nnacccnngg gnntttnngg 180
aagangggng ctcaannaca aanccntnna annnnggggn nnttttgnnn cccnaancng 240
gggcnaaaat tgacncccnc ncggcngnng gacttncntt nggnnaaaaa aagttnnant 300
nttnnnatac aanttanaan ttnaangggt aataannggn tnnncnngcc aaantgaaga 360
cataaataca tatnctgtng ggcaaancnt tttcacccgn cctaaganaa catgcccccc 420
cncaaaanca atccccnaac ntttcccnaa ncaaangggg gagcccntta atcctgtttt 480
taacatacnn gctcantgac gngggtacta aggatagant ccnccnccat tgggtttgag 540
ccataactgg antcccaaaa ggctttgggg taccnnacca ttttttnagg gaggagggga 600
naaattgngt gaatttaccc catgccaaag cttaanangg gcctcgncta aancccacng 660
gcgccaatnt ncaaaatcnt gggtttccan cctcacctng gaaatgcccc cccattggga 720
gganggggga cnttnggaag anggaccang gggggattct ggaantancc ccatgctttn 780
aacaaagctn aacttttntc cttt 804

<210> 345
<211> 422
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 210, 244, 251, 256, 271, 285, 289, 290, 292, 316, 348, 353, 361, 371, 378, 416
<223> n = A,T,C or G

<400> 345
ccgggcaggt acagtggccc cccgtgaaag acagaattgt ggttttcctg gtgtcacgcc 60
ctcccagtgt gcaaataagg gctgctgttt cgacgacacc gttcgtgggg tcccctggtg 120
cttctatcct aataccattg acgtccctcc agaagaggag tgtgaatttt agacacttct 180

gcagtggatc tgcctgcatc ctgacgcggn tgcccgtccc ccaagcaccg gttgaattaa 240
gttnccagga nctcgngctt gcgcaaccta ncaacccggg aactncctnn angaacaacg 300
cctttctgc caagcntgtg gcccttcggg ctttcaacaa aaccaacnag tantttggac 360
nttggctttc ntggaacnta tttggaacct taaccttcca taataaattt tggggnccct 420
ta 422

<210> 346
<211> 483
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 45, 46, 52, 53, 55, 58, 60, 62, 78, 87, 89, 90, 91, 98,
106, 116, 121, 127, 128, 129, 142, 158, 170, 184, 191, 197,
199, 200, 202, 206, 211, 212, 219, 224, 225, 228, 234, 236,
238, 240, 242, 243, 244, 248, 249, 253, 261, 265, 266
<223> n = A,T,C or G

<221> misc_feature
<222> 269, 270, 272, 283, 285, 301, 302, 308, 314, 334, 335, 339,
357, 364, 369, 402, 403, 404, 405, 407, 409, 410
<223> n = A,T,C or G

<400> 346
agggcnaatt ggagctcccc gcggtggcgg ccgaggtacg cgggnnacag anntnttncn 60
ancagtttct acaaggcntg aatcatngnn ntaagaanat tgcganggga ttactnacaa 120
naaattnnng ttgaccatct cngcagacac tggtgtgngg cgggaaattn acctttgttt 180
tttnctagcc ncggctngnn gngctnaatc nncaccttng cccnnggntg ctcntncntn 240
cnnnccgnna ccnctggagg naaanngtnn cntattctca gcnanttctg catgctctcc 300
nnagcctnct gcanattcta acaagggggg cgcnngatnc acaatgcctc ttccaancac 360
gagngggtnt tcttgggctc aaaatatatt tgttggatcc annnncngnn atccttttcc 420
aacacattcc cacctattgt gggaacagat ggcattataa gaacattgtg tttgatgaaa 480
atc 483

<210> 347
<211> 374
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 45, 47, 48, 50, 53, 56, 58, 60, 64, 65, 66, 69, 76, 78,
82, 89, 90, 101, 113, 117, 123, 143, 159, 162, 166, 168,
185, 188, 192, 202, 222, 226, 248, 262, 271, 272, 287, 288,
297, 301, 305, 307, 308, 311, 313, 315, 317, 318, 320
<223> n = A,T,C or G

<221> misc_feature
<222> 323, 324, 334, 336
<223> n = A,T,C or G

<400> 347
nattggagct ccccgcggtg gcggccgccc gggcaggtac ggatncnncn tgnccnangn 60
tggnnnaang gtatcntnct gnttgaacnn caattcagat nataatgagg agnattnggc 120
ctnggagaaa ctaaactgat ggncttaatg ggctaaatnc cnatgntnaa tccttatgga 180
ttttnggngc gntgggattg tntgttgaac ttattataag anaaangggc ttccaaagtg 240
cgaccacnta ctgtgttccc gncctgacag nncaatggcc taagctnntt tgaaatntat 300
naaangnnca ntntntnnan tgnngagcaa tggntncttt ccagacagga agactgctgc 360

taagtaccct cggc 374

<210> 348
<211> 544
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 93, 96, 381, 382, 384, 385, 388, 389, 390, 394, 401, 402, 413, 417, 421, 423, 428, 432, 434, 436, 437, 440, 441, 443, 444, 452, 453, 454, 459, 465, 471, 495, 502, 510, 511, 513, 517, 518, 521, 525, 528, 534, 535, 540
<223> n = A,T,C or G

<400> 348
cgaggtacat gtgngccccc cgtgaaagac agaattgtgg ttttcctggt gtcacgccct 60
cccagtgtgc aaataagggc tgctgtttcg acnacnccgt tcgtggggtc ccctggtgct 120
tctatcctaa taccatcgac gtccctccag aagaggagtg tgaattttag acacttctgc 180
agggatctgc ctgcatcctg acgcggtgcc gtccccagca cggtgattag tcccagagct 240
cggctgccac ctccaccgga cacctcagac acgcttctgc agctgtgcct cggctcacaa 300
cacagattga ctgctctgac tttgactact caaaattggc ctaaaaatta aaagagatcg 360
atattaaaaa aaaaaaaaaa nnannaannn cctngccggg nnaaaccttt tanattnggg 420
nanccccngg gntntnngan ntnnaaaaaa annnttttnt tcccnccccc nggggggggg 480
ggcaaaaaaa aaaanttttg gncccctttan ngngggnnta ntggnccntt tgcnnccccn 540
gggg 544

<210> 349
<211> 790
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 28, 40, 63, 64, 65, 66, 67, 68, 77, 84, 89, 90, 93, 99, 100, 111, 112, 117, 119, 120, 121, 132, 133, 134, 135, 138, 139, 140, 141, 152, 157, 158, 163, 166, 167, 168, 169, 170, 173, 178, 186, 188, 193, 196, 199, 201, 207, 208, 212
<223> n = A,T,C or G

<221> misc_feature
<222> 216, 218, 221, 223, 232, 238, 240, 241, 249, 250, 252, 261, 263, 264, 271, 275, 276, 279, 281, 284, 286, 287, 291, 293, 294, 296, 301, 302, 307, 311, 312, 316, 317, 318, 324, 333, 339, 346, 348, 350, 351, 353, 361, 362, 363, 364, 367
<223> n = A,T,C or G

<221> misc_feature
<222> 369, 372, 381, 393, 394, 401, 402, 403, 412, 424, 428, 435, 444, 452, 463, 464, 465, 467, 468, 469, 472, 473, 480, 482, 488, 496, 500, 510, 513, 514, 516, 518, 520, 526, 528, 533, 535, 544, 557, 558, 559, 560, 561, 564, 565, 566, 583
<223> n = A,T,C or G

<221> misc_feature
<222> 585, 586, 610, 612, 614, 618, 631, 633, 639, 645, 662, 666, 668, 669, 689, 692, 693, 698, 709, 716, 719, 720, 722, 725, 728, 731, 734, 737, 745, 753, 754, 755, 757, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772

<223> n = A,T,C or G

<221> misc_feature
<222> 773, 774, 775, 776, 778, 779
<223> n = A,T,C or G

<400> 349
aattggagct ccacccgcgg tggcggcncg aggtactttn tttttttttt tttttttttt 60
ttnnnnnncc ccccccnttt tttnaaaann ccnttaaann gggggggggg nnaaaancnn 120
nttttttttgg gnnnnaannn nggggggggg gnaaaanncc ccnctnnnnn ggnccccntt 180
ttacantngg ttnccnaang nttgaanntt tngggngntt nanaaaaccc cnttttttntn 240
ntttttttnn cnaaaaaaat ngnngaaagg nccanngcnc ncancnncca nanngngaaa 300
nncccgnggg nnaaannngc cccnaaaatg ggnccccant ttttcncncn ntngggggggg 360
nnnnaanant angggccccc ntaattttga aanntttttt nnntcccaaa anttcgaggt 420
gagnggantt ttttnaaacc ccancacccc cnttttaaaa aannngnnnt tnnaaaggcn 480
cnacaaantt ttggcncccn gaggggtccn gtnngngntn ttcacncngg ggncncttta 540
aaanattttt tttgggnnnn nccnnnaaaa acggggttac tantnncccc ccataacctc 600
aacctttggn antncaantg tgcaatggct ngnccttgna ccctnggggt ttttgcccct 660
gncccnanng ggccctgccc taaaaaccnc annttatncc cccccctnt tttaanggnn 720
cntcnatnaa nggnacnttc ttttnaaaaa atnnnanann nnnnnnnnnn nnnnnngnnc 780
cccccccccc 790

<210> 350
<211> 823
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 303, 368, 421, 432, 444, 459, 467, 503, 509, 512, 524, 551,
586, 589, 628, 636, 663, 664, 689, 694, 697, 712, 714, 718,
721, 731, 738, 752, 765, 782
<223> n = A,T,C or G

<400> 350
cgcccgggca ggtacagtgg tgtgatctcg gctcactgca acctctgcct cccgggttcg 60
agtgattctc ctgcctcagc cttcagcttg cactaccacg cccagctaat ttttgtattt 120
tcagtagaga tggagtttca ccatgttggc aaagatggtc tctatctctt gaccttgtga 180
tccacccgcc ttggcctccc aaagtgctag gattacaata ttggatttta tgttagcacc 240
agcctgtcct ttattgatca taccatttac ctggactctt ttcttcaaga acacaatcta 300
agnaatccta aaccagtttt gacacaaacc attgccttta acaacccatt catagtgagg 360
ggatttantg tagtttcaat gtcaccatcc aagatcccac cccagtacct cggccgcccc 420
nggcaggtcc cngggacaag ggcnacccag ctctcaaang aactggncca gcttccggat 480
gcctattaaa aacagaagga gcngcttgng gnaacaacta gaanccccctt ccaagccaaa 540
aggaatgggc nctttttttca ggaaagccgg gaactttttg ccaaanttna aaattttatt 600
ggaaaaaacc ccccggaacc tggaggangg ggtttnagcc taatttcttg gcgggttctt 660
aannaggaaa aaaacttggg accaaaggnt tttnggnaaa accccgcttg gnantccngg 720
naaataaagg nggttttnaa acccctggaa cnaaaggccc ggganattcc ccctccaaaa 780
anggaacctg ggggaccaaa tttcttttgg aaggaaaaaa aaa 823

<210> 351
<211> 586
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 51, 68, 84, 85, 88, 91, 92, 94, 96, 97, 98, 99, 100,
104, 106, 108, 109, 110, 111, 113, 114, 119, 120, 121, 125,

126, 128, 131, 135, 137, 141, 150, 151, 152, 159, 160, 165,
168, 175, 181, 184, 185, 189, 197, 198, 199, 200, 202
<223> n = A,T,C or G

<221> misc_feature
<222> 207, 218, 221, 223, 226, 227, 230, 231, 233, 234, 235, 237,
238, 239, 240, 242, 247, 249, 250, 252, 262, 263, 265, 270,
271, 274, 276, 288, 289, 290, 291, 292, 298, 301, 303, 304,
305, 309, 311, 318, 319, 323, 324, 330, 337, 338, 343
<223> n = A,T,C or G

<221> misc_feature
<222> 344, 348, 349, 356, 361, 363, 369, 372, 383, 390, 392, 394,
395, 406, 415, 418, 427, 429, 430, 435, 437, 449, 462, 468,
471, 479, 481, 482, 483, 485, 488, 507, 515, 521, 522, 551,
558, 566, 572, 573, 574, 575, 586
<223> n = A,T,C or G

<400> 351
ccgggcaggt actttttttt tttttttttt tttttttttt aaaaaanggg nttttttttt 60
tccccccnag gggggggggg gggnncantt nngntnnnnn ggcncntnnn ncnnggggnn 120
naaannantt ncccntnttt ntcctaaaan nnaaaaaann caggngtncc ccccnccccc 180
nttnntttnt aaaaaannnn cnttttnaaa aaaggggntt ntnttnnttn ncnnnannnn 240
tnaaaancnn cngccctaaa annantttn ngcntngccc cctaaaannn nnttttttnta 300
ngnnnaaanc nagggccnng gcnnaaaaan aattttnngc cannaatnng aaaaancctg 360
ntnttttttnt tnagagggga aantttcaan cncnnctttt ttaaanaaaa aaagnttngt 420
gggacanann tgccntnaaa aaaaaacang atatttatgg gnagatantt naccccatna 480
nnncnccnct gggggggtt catgaanaca tcccnccccc nntaaaaata gaaaaaaccc 540
ccccctgtcg ngaatttntt ttaaantttt tnnnnccccc cccccn 586

<210> 352
<211> 594
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 41, 63, 111, 114, 115, 116, 117, 118, 126, 127, 128, 132,
135, 141, 142, 143, 144, 155, 162, 163, 164, 177, 179, 181,
182, 184, 185, 186, 187, 188, 189, 198, 207, 208, 210, 214,
224, 231, 233, 238, 241, 246, 251, 253, 256, 263, 267
<223> n = A,T,C or G

<221> misc_feature
<222> 269, 275, 278, 279, 281, 283, 285, 287, 291, 315, 326, 329,
330, 333, 334, 335, 336, 337, 343, 351, 352, 359, 369, 371,
373, 376, 378, 387, 392, 393, 402, 406, 416, 420, 421, 449,
450, 459, 467, 468, 470, 473, 474, 487, 497, 498, 511
<223> n = A,T,C or G

<221> misc_feature
<222> 517, 518, 525, 526, 559, 560, 571, 580, 583
<223> n = A,T,C or G

<400> 352
tggagctccc cgcggtggcg gccgcccggg caggtacttt nttttttttt tttttttttt 60
ttntaatttt tttttttttt tttttttttt tttttttttt tttaaaaaaa nacnnnnntt 120
tttttnnnga cncantttttt nnnnaaaaaa aaaanaccct cnnnttttttt ttttaangnc 180
nncnnnnnnt aaaaaaantt tttttnntn cccngggggg gggngccaac ncnttttnaa 240

naaatnccca ngnggngggg gancccnana caatnatnna ngnancnccc naaaaaattt 300
aaaaaaaccc ccccnttttt ggggangann ccnnnnnttt ttntaaaaaa nncaccggnc 360
accccaaana ngnttntnta aaaaaanccc cnntttttttc anaaangggg gggggngacn 420
naaaaaaaaa aaaatttttt ttttttgnn gggggatcnt ttttccnngn ttnnaaaaaa 480
aaaaaanccc ccccccnncg ggaaaaaatt naaaaanntt ttttnncccc cccccccccg 540
gggggggcc ccccccccnn tttttttttt ntttttaaan aanaaaaaaa accc 594

<210> 353
<211> 267
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 44, 87, 122, 175, 188, 199, 206
<223> n = A,T,C or G

<400> 353
cgangtacga gacctgcttc tatctcctga agaaaactgt ggcnttctgg aatgggaaga 60
tagggaacaa ggaatttttc gggtggntaa atcggaagcc ctggcaaaga tgtggggaca 120
anggaagaaa aatgacagaa tgacatatga aaagttgagc agagccctga ggtangttaa 180
tagcatanaa tactatganc cttcangaag agttatatac aatggctggc tgtagaaaat 240
tacactgttt ttgcaggttt tttactt 267

<210> 354
<211> 312
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 19, 42, 69, 103, 106, 124, 217, 233, 253, 292
<223> n = A,T,C or G

<400> 354
tgtntccaca cctgtcctnt tggagtttgg atggcaaaga cntgcgaggt ggttttgggc 60
acacctaang tctgtttcag gggtcctgaa tgaggtgatt gcnacnactc aaagactaag 120
tttntaagat cccaggcatg gagtaaagca attctataca caggatctca atcctagtca 180
caaagacttc ttaatgatac atgggctcaa agacatnggt tcccctgaac acntcagctt 240
ggattcatac tgnccccata ttttccagtg tgccatgtag ttatccttta tnaccctcgt 300
aaccatgccc at 312

<210> 355
<211> 676
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 4, 7, 10, 15, 19, 20, 23, 26, 27, 28, 32, 33, 34, 36,
40, 43, 51, 59, 63, 65, 70, 73, 78, 79, 81, 88, 92, 93,
102, 104, 106, 112, 118, 130, 157, 158, 186, 220, 225, 226,
229, 230, 232, 236, 238, 240, 244, 245, 254, 263, 266, 267
<223> n = A,T,C or G

<221> misc_feature
<222> 275, 287, 302, 320, 357, 397, 410, 440, 457, 470, 505, 515,
520, 527, 532, 543, 554, 563, 577, 594, 615, 619, 623, 624,
628, 635, 638, 639, 649, 656

<223> n = A,T,C or G

<400> 355
gntntcnggn ttccntctnn ctnagnnnaa annncncttn atnctgttga ngcaagagng 60
acngnacatn canccctnnc nacccagnct gnntttcact gnanancaag gntgaggnag 120
cttcagggcn acactgcgag tttctatgca tgaaatnntc ctagcatttt gcgttctcat 180
aactanaata tggcttgtgt tgcaagacca atgatactgn gaacnntann tncccngncn 240
gccnntctag aacnagtgcg atnccnnggg ctgcntgaat tgagatntca atcttatcct 300
tnccgtacga cctgggaggn ggggcccggc tacccagaat tttggttccc ttttacncga 360
agggtctaat tgcgctactt aggccgtaaa tcaatgnaac atgagcatgn ctctcctggt 420
ggcgaaaaat tggagtatan ccgtatcatc aaatatntca ccacgaactn taccgcatca 480
ccttggaagc catttatagc agttnaaagc actancgggn tgccctnaac tngaagttgg 540
aancttaaaa cttnaccaat ttnaatttgg ccgtttnggg gcattaaacc cgcncccccc 600
ccccctaccc cccgngaana aannctgncc ccccnttnnc ccccctttna ttttanctcc 660
cccccccccc cccccc 676

<210> 356
<211> 633
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 353, 389, 408, 417, 434, 496, 498, 502, 511, 522, 542, 547,
557, 558, 574, 576, 578, 589, 592, 598, 625
<223> n = A,T,C or G

<400> 356
aggtactcat ggtctgccaa ccctggcttc acttggcacg gttgatttag gtgctcatgt 60
caccaaacag cagagccatc ctgagcagaa ttcagtagac tattgccaac aactgactgt 120
gtctcagggg ccaagccctg agctctgtga tcaagctata gccttttctg atcctttgtc 180
atacttcaca gatttatcat ttagtgctgc attgaaagag gaacaaagat tggatggcat 240
gctattggat gacacaatct ctccatttgg aacagatcct ctgctatctg ccacttcccc 300
tgcagtttcc aaagaaagca gtaggagaag taagctttag ctcaaatgat ggngatgaat 360
tattagaaat aaacagaccc caatttatna actgggaaag caattttntg cttgggngct 420
atgcaaatta tgcntctggg gtttcaatat tgtttgcttt tggctttatt tttttttttt 480
tttaaaaggg aatgtngntg gnttcattgg naaaaaaacc tngttttgga aagccccacc 540
cnaaagnaat tttcccnngg gaggaaaaaa accntnangt gggttaaang gnaaattntt 600
ttgggggggg ccaaaaaaaa aaaanggggg gtt 633

<210> 357
<211> 147
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 22, 26, 30, 33, 37, 49, 55, 74, 77, 80, 81, 94, 95, 99,
119, 129
<223> n = A,T,C or G

<400> 357
cgcgtaatac gactnactat anggtntaan ggngaantgc agctccacng cggcngcggc 60
ccgcccgggc aggnacncgn nttcgtggcg atannggana gcccggtgaa aaggggccna 120
caggtcttnc tggcttaaag ggacaca 147

<210> 358
<211> 493
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 66, 104, 116, 177, 198, 202, 219, 243, 257, 277, 319, 342, 369, 378, 392, 396, 399, 405, 417, 434, 436, 448, 453, 454, 464, 472, 481
<223> n = A,T,C or G

<400> 358
ctccaccgcg gtggcggccc gcccgggcag gtaccgcggg aagggctgct gtttcgacga 60
caccgntcgt ggggtcccct ggtgcttcta tcctaatacc atcnacgtcc ctccanaaga 120
ggagtgtgaa ttttacacac ttctgcaggg atctgcctgc atcctgacgc ggtgccntcc 180
ccagcacggt gattagtncc anagctcggc tgccacctnc accggacacc tcatacacgc 240
ttntgcagct gtgcctnggc tcacaacaca gcattgnctg ctctgacttt ggactactcc 300
aaaaattggc cttaaaaant taaaaggaga tccgatactt gnaaagaaat actaataaac 360
aaaacaggnt tccctttngc gcgctcttat anactnggng ggaanccccc cggggcnttg 420
gcaggggaaa tttncnaatt attcagangc ttnnattcta attncccgtc cncaccttcc 480
naaggggggg ggg 493

<210> 359
<211> 549
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 78, 110, 118, 174, 184, 200, 206, 209, 211, 213, 221, 267, 316, 347, 363, 377, 381, 385, 391, 399, 407, 434, 436, 450, 465, 473, 483, 504, 531
<223> n = A,T,C or G

<400> 359
atagctccta atttaattat tataacaaaa atttactgag catctactat gggcaaacat 60
gggaaatcta aacatgcntg agtcccagtc ctagctcagg atgactttan aacctaangg 120
aaaacataaa catatacaga aggaacgtca acccaacatc agagtctttt taanggttat 180
atanaacatc cttcaagacn ccacanaana ncncgcctga nggggtgcct gccacaaagg 240
atgtgagggg taagcagggc gggcagnatt tcccaatccc gctgatctcc acaaccatag 300
gagggggcag cttccnttcc cccattccat atcagtctat tcatacntta caagacaaaa 360
gtntgattcc ttccaanaaa nagtntgcca nggaccacnc acatacngga ttttacagaa 420
tctttgaaat catntntttt caacattgtn atcgttcaga taaanaaaat ganatcaggc 480
ctncactggc actgaatcaa agtntttggg gagataggcc ccaaaaattt ntttaaaaaa 540
ataaaaatg 549

<210> 360
<211> 283
<212> DNA
<213> Homo sapiens

<400> 360
aggtacgcgg gggaggaact gctcagttag gacccagacg gaaccatgga agccccagcg 60
cagcttctct tcctcctgct actctggctc ccagtttcag atgccagtgg agaaatagtg 120
atggcgcagt ctccagccac cctgtctgtg tctccaggag aaagagccac cctctcctgc 180
agggccagcc agagtgttag cggcaactta gcctggtatc aacataaacc tggccaggct 240
cccaggctcc tcatctatgg tgcatccacc agggccactg gta 283

<210> 361
<211> 288
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 263, 273
<223> n = A,T,C or G

<400> 361
agcagtataa tcactggcct tcttttggcc aggggaccaa gctggagatc aaacgaactg 60
tggctgcacc atctgtcttc atcttcccgc catctgatga gcaagttgaa atctggaact 120
gcctctgttg tgtgcctgct gaaataactt ctattcccaa gagagggcca aagttacctg 180
cccggggccg gccgctctta gaactaagtg ggatccccg ggcctgcagg aatttcgata 240
ttcaaagctt tatcgatacc cgntcgacct cgnagggggg ggccccgg 288

<210> 362
<211> 516
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 401, 433, 445, 446, 468, 485, 509
<223> n = A,T,C or G

<400> 362
ggccgcccgg gcaggtacaa tgcaaaagat tcaaagcccc ttccactctc ttccagtgtg 60
caagatgaaa gaatgcatat gctattgctt cactgtctcc tctcttcagg atatgttctg 120
ggggtaggat taagcttttc atttctagta ggtattttgg cacatgagga ttgaattcca 180
cagctctatg aatgggcctc tactggcatt catctcttgc tggtgctcaa gccccccgcc 240
gagaatgcca gccctcaagg aagaagaaat tttgtcaaga aaaacagctc tttggctttt 300
ggagccaaaa gccagcctgg tggtaagcaa tatttggttg gcttgacctt ttgggtaaag 360
ccttaatatc aatcaatacc ttttggctta aagaacttgg ncctggaacc attcaagcca 420
ttattgcctt tgntaagttt cccannaaag gggcctttct taaaaaangg tttttcaatt 480
gggantattt ggaaccatac ctcagaaang ggggga 516

<210> 363
<211> 565
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 13, 32, 68, 77, 81, 83, 88, 89, 105, 106, 108, 123, 137, 138, 156, 160, 171, 176, 178, 182, 184, 189, 197, 202, 208, 210, 213, 214, 216, 256, 267, 273, 275, 277, 279, 285, 305, 313, 314, 321, 338, 345, 367, 379, 386, 395, 406, 419
<223> n = A,T,C or G

<221> misc_feature
<222> 430, 433, 435, 436, 439, 440, 449, 471, 475, 481, 487, 492, 498, 500, 503, 504, 508, 514, 525, 533, 539, 543, 544
<223> n = A,T,C or G

<400> 363
aggnactttt ttnttttttt tttttttttt tnggaattat cttgatttcc tttcactacc 60
aagaaaanaa atacttnaat ncnttagnna atatttttgg ggtannanaa aatttttaag 120
acngtagtta tgagtannat gtgtattcac aacagnaatn ttccccctgg nagagngngc 180
tnanaatana cctgctntgg gntaaaanan ctnnanggct ttggacattg cctttacatt 240
caaaaatgga gttcantgtc atggccngaa aanangnant ccccnaggga aagccaggga 300

acccncccgc ttnnaaaagc nttgggcctt tagggaanaa aagcnagaag aaggcttggg 360
gttgccnttt ccccccacnc tggatntccc ccaancctat tttggntttc ttgttgaang 420
tttccaaaan ccntnnccnn aaaaacttnt tgggggccaa aagttcacct nttantacaa 480
ngcttgngga anccccantn ttnntccncc ccgntccgtt tatgnagccc agncaattna 540
atnngggacc ttcccttggg gcttt 565

<210> 364
<211> 189
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 10, 13, 15, 22, 25, 26, 50, 55, 56, 59, 81, 99, 130
<223> n = A,T,C or G

<400> 364
tancgtgggn gcngncgaag tnctnngtta actgccttta tatcatgctn aagtnnaang 60
ctaatttgag tttgaaatac ngtggctaat agagctaana aaacacattc atcatcattc 120
tctggtattn tctaatgtct tctggtagct cccactcatc cccagagtag ccaaggttga 180
acttgaacc 189

<210> 365
<211> 632
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 227, 235, 400, 402, 404, 409, 436, 456, 457, 473, 509, 525, 549, 550, 555, 559, 564, 567, 581, 593, 600, 608, 609, 616, 617, 627
<223> n = A,T,C or G

<400> 365
aggtacaaat ttggaaaaaa atgcacacgg gtggcaggaa gacaagctat gatctgctcc 60
aggcatcaag ctcattttat ggatttctgt cttttaaaac aatcagattg caatagacgt 120
tcgaaaggct tcattttctt ctcttttttt taacctgcaa acatgctgat aaaatttctt 180
cacatctcag cttacatttg gattcagagt tgttgtctac ggagggngag agcanaaact 240
cttaagaaat cctttcttct ccctaagggg atgaggggat gatcttttgt ggtgtcttga 300
tcaaacttta ttttcctaga gttgtggaat gaccaacagc ccatgccatt gatgctgatc 360
agagaaaaaa ctattcaatt tctgccattt agagacacan tncnaatgnc tcccattccc 420
caaagggttc caaaangttt ttcaaaataa acctgnnggc agcttcacca aangttgggg 480
gggaaaaggc attgaattag gtttggcang gttatggtaa ggganaaggg gtgaagaatt 540
taaaagaann ttacntacnt tttnaanttt ttaaatttta nttttaaagg tcntaaaaan 600
tcccattnng aaaaannttt tcccccnttt tt 632

<210> 366
<211> 138
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 25, 27, 31, 33, 40, 42, 43, 46, 63, 102, 130
<223> n = A,T,C or G

<400> 366
gcccgcccgg gcaggtactt tcatngngtt ngngatgttn tnntgngaca gtgtctcact 60

agngcagtgg ccgctatctt ggctcactgc aacctccttc tnttgggttc aagtgatcct 120
catgcttcan agatgggg 138

<210> 367
<211> 46
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 8, 26, 30
<223> n = A,T,C or G

<400> 367
cnggccangt acgcaggggg ccccgncggn catcgttgag ccccgc 46

<210> 368
<211> 41
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7
<223> n = A,T,C or G

<400> 368
acgactncta tagggcgaat tggagctccc cgcggtggcg g 41

<210> 369
<211> 147
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 67, 74, 76, 86, 90, 99, 103, 111, 130, 145
<223> n = A,T,C or G

<400> 369
ctncttaggg cgaattggag ctccccgcgg tggcggccgc ccgggcaggt acagaactta 60
agacacnact attngntgag atgaanaaan gcatatatng gangccttca naatgaaatg 120
gtcagagggn gagtttacac agatnga 147

<210> 370
<211> 33
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 15, 22
<223> n = A,T,C or G

<400> 370
gctnttataa atgantaaat angctaagaa tag 33

<210> 371
<211> 60

<212> DNA
<213> Homo sapiens

<400> 371
ccgggcaggt actctgcgtt gttaccactg cttacttttt tttttttttt tttttttttt 60

<210> 372
<211> 94
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 51
<223> n = A,T,C or G

<400> 372
agggcgaatn ggagctcccc gcggtggcgg ccgaggtacc cgaatttaat ncgagtggtc 60
atcacagtcc ccgaggtgat gatgctggag gcgt 94

<210> 373
<211> 38
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 34
<223> n = A,T,C or G

<400> 373
ggagctcccc gcggtggcgg cccgaggtac tttntttt 38

<210> 374
<211> 51
<212> DNA
<213> Homo sapiens

<400> 374
ccgccgtaat accgactcac tattagggcc gaattggagc tccaccgcgg t 51

<210> 375
<211> 47
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 22
<223> n = A,T,C or G

<400> 375
ctccccgcgg tggcggccgn cnggccaggt actttttttt ttttttt 47

<210> 376
<211> 80
<212> DNA
<213> Homo sapiens

<400> 376
aattggagct ccccgcggtg gcggccgccc gggcaggtac tccagcctgg gcgacagacc 60
aaggctctgt ctcaaaaaaa 80

<210> 377
<211> 231
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 104, 116, 149, 154, 161, 175
<223> n = A,T,C or G

<400> 377
aattggagct ccccgcggtg gcggccgang tgagaggatg gcttgagtcc aggaggtcaa 60
agctacagtg aaccatgttt gtgtggagtg ccactgcact ccancccagg tgacanagca 120
agaccgtgtc ataaaaaata aaccacacnc aaanagagaa ngatctttat ggatnaaaaa 180
gataataata atgtgtattt actgaatgcc aattatctat ccaacctggt g 231

<210> 378
<211> 25
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6
<223> n = A,T,C or G

<400> 378
agggcnaatt ggagctccac cgcgg 25

<210> 379
<211> 371
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 343
<223> n = A,T,C or G

<400> 379
ccgcggtggc ggccgaggta cttttttttt tttttttttt ttttttgaga taagtctcgc 60
tctgtcaccc aggctggagt gcagtggcat gatctcggct cactgcaagc tccgcctcct 120
gggttcatgc cattctcctg cctcacctcg gagtagctgg gactacaggc gtccgccacc 180
gcgcctggct catttttttt gtatttttag tagagacggg gtttcacggt gttggccagg 240
atggtctcga tctcctgacc ttgtgatcca cccgcctcga ccttcaaagt gctgggatta 300
caggcgtgag ccaccgcgcc cagccgagtt cagactattt ggngggcaac agcaagacat 360
ggtttttag g 371

<210> 380
<211> 343
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 151
<223> n = A,T,C or G

<400> 380
ccgcggtggc ggccgcccgg gcaggtactt tttttttttt tttttttttt ggagatggag 60
tcttgcagtg ttgcccaggc tggagtgcag tggcacgatc tcagctcact gcaagctcca 120
cctcccgggc tcaagcgatt ctcctgctca ncctcctgag tagctgggat tacaggcgtg 180
cgccaccacg cccagctcat ttttgtattt ttagtagaga ccgggtttcg ccatgttggt 240
caggctggtc tcgaactcct gacctcgtga tccgcctgcc tcggccccgc aaagtgctgg 300
gattacagac gtgagccacc acgcccagct ggaagttaac ttt 343

<210> 381
<211> 54
<212> DNA
<213> Homo sapiens

<400> 381
aattggagct ccccgcggtg gcggccgccc gggcaggtac tttttttttt tttt 54

<210> 382
<211> 41
<212> DNA
<213> Homo sapiens

<400> 382
atagggcgaa ttggagctcc ccgcggtggc ggccgcccgg g 41

<210> 383
<211> 40
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 27, 28
<223> n = A,T,C or G

<400> 383
ggagctcccc gcggtggcgg ccgnccnngc aggtactttt 40

<210> 384
<211> 85
<212> DNA
<213> Homo sapiens

<400> 384
gagctccacc cgcggtgggc ggccgcccgg gcaggtacgc ggggcttgaa cccggagtca 60
acagagactc catctcaaaa aaaaa 85

<210> 385
<211> 81
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 11, 26, 41
<223> n = A,T,C or G

<400> 385
ccgggcnggt nctcagacta ccacanatat tcccttacgg nccaggtctc tcatgttatg 60
ctgtttttc caacctgagc t 81

<210> 386
<211> 30
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 18, 21, 27, 28
<223> n = A,T,C or G

<400> 386
cagaatcctg gccaggnncc naggctnntc 30

<210> 387
<211> 141
<212> DNA
<213> Homo sapiens

<400> 387
ggagctcccc gcggtggcgg cccgcccggg caggtacttt tttttttttt tttttttttt 60
tccttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttcctttt 120
tttttttttt tttttttttt t 141

<210> 388
<211> 69
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 46
<223> n = A,T,C or G

<400> 388
tatagggcga attggagctc cccgcggtgg cggccgaggt actttntttt tttttttttt 60
tttttcctt 69

<210> 389
<211> 94
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 31, 45, 58, 62, 67, 68, 77, 81
<223> n = A,T,C or G

<400> 389
tgactttgat gtgtgacaac aggcaccanc natcgccaac taganaagct caccaganct 60
cngatgnngg aagcttntat nggggcctca gcat 94

<210> 390
<211> 343
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 94, 130, 186, 216, 291, 300, 316
<223> n = A,T,C or G

<400> 390
ccgggcaggt acagtggtgt gatctcaact cactgcaacc ctctacctcc tgggttcaag 60
tgattctcct gcctcagcct cctgagcagc tcanattata ggcacccgcc aacatgcccg 120
gctaattttn gtatttttag tagagacggg gtttcaccat gttggccagg ctggtctcga 180
actctngacc tcaggtgatc cacccgcccc agcctnccaa agtgctggga ttacaggcat 240
gagccaccgc gcctggccaa aatgaagcat tttttaaac caaactgttt ntttgctagn 300
gtgatctagc catggnattc attccactgt gctctatttc ttt 343

<210> 391
<211> 84
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 33, 35, 39, 44, 47, 52, 62, 67
<223> n = A,T,C or G

<400> 391
aagcctcaag agagcagaca cgtgctgaaa anntnctgng cagnccngat tnccctaaac 60
tntggtnagt aacaggtctg cctg 84

<210> 392
<211> 65
<212> DNA
<213> Homo sapiens

<400> 392
cgcccgggca gggtactttt tttttttttt tttttttttt tttttttttt tttttttttt 60
ttttt 65

<210> 393
<211> 87
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 30, 38, 40, 41, 43, 46, 53, 59
<223> n = A,T,C or G

<400> 393
cgcggtggcg gcccgaggta ctcgagccnn atggagtngn ncngcncatc gancagacnc 60
acggacgtgt cccaggagga gacaagc 87

<210> 394
<211> 201
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 46, 47, 59, 65, 66, 69, 70, 72, 80, 82, 83, 84, 89, 94, 95,
96, 97, 98, 99, 100, 101, 102, 105, 106, 111, 112, 114,
115, 117, 118, 125, 126, 132, 137, 140, 141, 143, 144, 145,
146, 158, 161, 163, 164, 166, 174, 177, 183, 184, 185
<223> n = A,T,C or G

<221> misc_feature
<222> 188
<223> n = A,T,C or G

<400> 394
cgcccgggca ggtacttttt tttttttttt ttttttttta aaaaannatt tttttttttng 60
ccccnnggnn gnaaaaaaan annnaattnt aaannnnnnn nnccnncccc nntnngnnta 120
aaaannattt tntgccntan ncnnnnaaag gggggggntt ntnngncccc cccnccnccc 180
ccnnnttntt tttttttttt t 201

<210> 395
<211> 397
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 245, 337
<223> n = A,T,C or G

<400> 395
gctgattgga gctccccgcg gtggcggccg aggtacaagc agtaattgat tcactggcct 60.
tggactactt gcaggtcagc ttgtctcaca taacaggttg gtatatgtat aactatcaca 120
taattatgca ttttagtaaa aataattgtt tagaactggc ttcgggcagt tgtgacctct 180
aactgtaatt tccttgcttc ttctgtatgt ttccacctct tgtgctgtgc gcctagccaa 240
atcanagtgc tcttgataaa aattcttctc aaatttaggc agctcatcaa gattccactt 300
ctttttaact aatttctccc cagggtttcc aaacttnttt ccagataagg gccctgccct 360
acttcctcca aatcgaggtg caccaaaccc tcggtcc 397

<210> 396
<211> 372
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 65, 95, 151, 156, 170, 215, 222, 249, 259, 275, 278, 301,
320
<223> n = A,T,C or G

<400> 396
cgcccgggca ggtacgccgg gtggcgtcac gccctcccag tgtgcaaata aggcttgttg 60
tttcnacaaa cccgttcgtg ggtcccttgt gcttntatct aatacaatcg acttccttcc 120
agaaaaagga agtgtgaaat ttaaaacctt nttganggaa tttgcttcan tcttgacccg 180
gtgcccgccc caacacgggt gaataattcc aagangctcg gnttgcaact tcaaccggaa 240
caccttaana acacgcttnt tcagcttgtg ccttnggntt aaaacaaaaa aattgacttg 300
nttctgactt tgactacttn aaaattggcc taaaaattaa aaagaagaat cgatcccaaa 360
aaaaaaaaaa aa 372

<210> 397
<211> 134
<212> DNA
<213> Homo sapiens

<400> 397
ccgggcaggt actactgctg agctgactgt caaaccacaa gatgcagtcc ttcccactct 60
tcctctcctt tccaaaggca gaggagcctc atcccatagc cgccaccagc cctagtatga 120
ggagtacctc ggcg 134

<210> 398
<211> 475
<212> DNA
<213> Homo sapiens

<400> 398
aggtaccagc tgtaaccaat acgattctgg ggcaggttgt gggcgagtag aagaacctcc 60
ttcccctctg cgacattgaa tggcgtggat tcaatagtga gcttggcagt ggtgggtggg 120
ttccagaagg ttagaagtga ggctgtgagc aggacctcct tccaggggac atgcaatctg 180
cagggagggg ctgagggggg tcccatggtc tctgctgtct tctctgtccg cctctttgta 240
gaggagcttg agctccagga atgctctggt cagggctgct gtgactgttg gccctgctgt 300
ccttcctcct tctgtccccg cgtacctgcc cgggcggccg ctcgagggtc tttgtctttc 360
ttggcccgac tttccagcgt ccttcttctt cttgtcgtcc ttaggcggca ttgcgaagct 420
cggagaatag ctgcagacac cgcagcctcg tcaagatgtc ggacaaaaaa aaaaa 475

<210> 399
<211> 377
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 98, 121, 143, 229, 237, 319, 323, 369
<223> n = A,T,C or G

<400> 399
tggagctcca cccgcggtgg cggccgttaa acatgtgtca ctgggcaggc ggtgcctcta 60
atactggtga tgctagaggt gatgtttttg gtaaacangc gggggtaaga tttgccgatt 120
ncctttactt tttttaacct ttnctttatg aaccatccct gtgttggggt gaaagtgagg 180
gtaaataatg acttggtggg tgaattggaa aaattgggct ggtaaatgnc aagtcantgg 240
tttaatctga ccccagctta tgccggagga aaaaatggtt tcaatgttac ttatccaaca 300
ttaattcttc tattagggng aanagaattg gtcccaattg ggtggtgaag gaggtcaatt 360
atatggttng ggaattt 377

<210> 400
<211> 367
<212> DNA
<213> Homo sapiens

<400> 400
aggtacaacg cagagcaggt cctgagttgg gagccagtgg ccctgagcaa tagcacgagg 60
cctgttgtct accaagtgca gtttaaatac accgacagta aatggttcac ggccgaggta 120
cttgttgttg ctttgtttgg agggtgtggt gggctccatt cccgccttga cgggggcttg 180
ctatcttgcc ttccaggcca ctgtcacggc tcccgggtag aagtcactta tgagacacac 240
cagtgtggcc ttgttggctt gaactcctca gaggagggcg ggaacaagag tgaccgaggg 300
ggcaccttgg gctgacctag gacggtcaag cttggtccct tccgccgaac acccaattgg 360
tgtcggc 367

<210> 401
<211> 169
<212> DNA
<213> Homo sapiens

<400> 401
aggtacagca aaaacccacc tgtgtaaaca cacacagcaa agtgatgtaa gaagtttcca 60
tataaagggc tgcagtatgg gagaggtaat gtgcaggctg gttgcggttg taggggccca 120
ccttactgaa cttttccatg atatgggacc tgcccggccg ggccgtcta 169

<210> 402
<211> 459
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 336, 402, 411
<223> n = A,T,C or G

<400> 402
gagctccccg cggtggcggc cgaggtacac caattgagga gagacacatg ggtgggaaat 60
tgcaataaaa agacggccca tagcaggctg cattcccatg gctggccaga ggaggaacgc 120
tttgtgttct catcggagct gcatgggaag tctgcataca gcaaagtgac ctgcatgcct 180
caccttatgg aaaggatggt ggctctggcc tcctgtggct ggccttggtc tcctgcattc 240
tgacccaggc atctgcagtg cagcgaggtt atggaaaccc cattgaagcc agttcgtatg 300
ggctggacct ggactgcgga gctcctggca ccccanaggc tcatgtctgt tttgacccct 360
gtcagaatta caccctcctg gatgaaccct tccgaagcac anagaactca ncagggtccc 420
aggggtgcga taaaaacatg agcggctggt acctgcccg 459

<210> 403
<211> 397
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 147, 334, 397
<223> n = A,T,C or G

<400> 403
ggaccgaggg tttggtgcac ctcgatttgg aggaagtagg gcaggccctt atctggaaag 60
aagtttggaa accctgggga gaaattagtt aaaaagaagt ggaatcttga tgaacctgcc 120
taaatttgag aagaattttt tatcaanagc accctgattt gctaggcgca cagcacaaga 180
ggtgggaaac atacagaaga agcagggaat tcagttagaa ggtcacaact gcccgaaacc 240
cagttctaac aattatttta ctaaaatgca taattatgtg atagttatac atatccaacc 300
tgttatgtga gacaagctga cctgcaaagt agtncaaggc cagtgaatca attactgctt 360
gtacctgccc cgggcggccg ctctaaacta gtggatn 397

<210> 404
<211> 633
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 54, 56, 76, 79, 83, 85, 86, 92, 93, 94, 106, 119, 127,
137, 138, 153, 174, 187, 202, 210, 224, 234, 247, 249, 254,
263, 266, 274, 296, 300, 311, 328, 365, 401, 403, 407, 416,
425, 459, 462, 472, 475, 517, 533, 544, 546, 552, 574
<223> n = A,T,C or G

<221> misc_feature
<222> 605, 609, 610, 612, 620

<223> n = A,T,C or G

<400> 404
aggtacacac tgaaaccact gtcagattaa naaactacca caacttgtct cagntnttca 60
aacaatgaat caagtnccnt ggngnnggct gnnnattaat cctgtnttgg cactgctgnt 120
ggctatnaaa ctcaccnnca agggtaaacg atnaaattga accacctggt aggngttata 180
ttaacanatg atacttttat tnttggaaan tccaagtttg cttncttggt ctgntgcaag 240
ggcaaangng gatnagaaac cangtngcaa agcntgctct ggagcattgt catttnccan 300
tttaataaca ngtacctgcc cgggcggncg cccgggcagg tacttcactg gaaatatggg 360
cgccnaggtg gccttcaact ggatcattgt tcacatggaa nanccanatt ttgctnaacc 420
cactnaccat gcctggttat ggaagggcat cttctgctng ancctctatt tntgntgctt 480
cttggactga ataaccaacc tccaaaaaaa aatctancta tcatcacctc cantggaatt 540
tcancnaaat cnagctattt caaagcacta ccancaacaa ataataacct acaaaaaaac 600
acttncatnn gnatctttan ccacccctaa att 633

<210> 405
<211> 134
<212> DNA
<213> Homo sapiens

<400> 405
agctccaccg cggtggcggc ccgaggtacg cgggggggcgc cattttgtct cggcagcggt 60
ggcccgtagc tccatcgcat tttatgtttc tggcgagaag ggaacggagt tttcatcagg 120
tagattggtt ttgt 134

<210> 406
<211> 298
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 19
<223> n = A,T,C or G

<400> 406
gctcnccgcg gtggcggcnc gaggtacagc atttcctgga ggatctctgg agcgatatag 60
tctggcgtgc cacagaatgt ggccgtggtg acaccattgc aaatcccctc cttgcacatt 120
ccgaagtctg ccagtttaca gtgaccctcg tggtccaaca ggacattgtc cagtttcaga 180
tctctcatac tcagcctata ccccatcctc cactctagca cccatctcta cccatcagag 240
tcagaatgaa cacccatagg ggaggtggcc actgtgtgcc cccccgcgta cctgcccg 298

<210> 407
<211> 99
<212> DNA
<213> Homo sapiens

<400> 407
aggtaccagg atgtccagtg cgaccatctt ttccagcagg gccagaagga ccagcagggc 60
ccctaggacc agcaggaccc acggagccag gagcacctt 99

<210> 408
<211> 191
<212> DNA
<213> Homo sapiens

<400> 408
gggctctccc ttacccgcgt acctgcccgg gcggccgagg tacacgtctc tgtctgggcc 60
tcggccaggg tgccgagggc cagcatggac accaggacca gggcgcagat caccttgttc 120

tccatggtgg ccattgcctc ctctctgctc caaaggcgac cccgagtcag ggatccccgc 180
gtacctgccc g 191

<210> 409
<211> 254
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 409
nattggagct ccccgcggtg gcggccgccc gggcaggtac tgtccaactg gatgctgccc 60
tggtggctga aggcacactt catgatgctg tccagggtca tcagggagac atgttgaaag 120
agctccaggc gtgagttttg ggcaatgtgt tcctcccatt tgttcagcat catccgaaca 180
ctctcagaca tcatggtgat gaatattttc agaatgctga tgttgaagcc aggtttcaca 240
atctggcggt acct 254

<210> 410
<211> 344
<212> DNA
<213> Homo sapiens

<400> 410
aggtacaagc agtaattgat tcactggcct tggactactt gcaggtcagc ttgtctcaca 60
taacaggttg gtatatgtat aactatcaca taattatgca ttttagtaaa aataattgtt 120
tagaactggc ttcgggcagt tgtgacctct aactgtaatt tccttgcttc ttctgtatgt 180
ttccacccct tgtgctgtgc gcctagccaa atcagggtgc tcttgataaa aattcttctc 240
aaatttaggc agctcatcaa gattccactt ctttttaact aatttctccc cagggtttcc 300
aaacttcttt ccagataagg gccctgccct acttcctcca aatc 344

<210> 411
<211> 338
<212> DNA
<213> Homo sapiens

<400> 411
aggtacaagc agtaattgat tcactggcct tggactactt gcaggtcagc ttgtctcaca 60
taacaggttg gtatatgtat aactatcaca taattatgca ttttagtaaa aataattgtt 120
tagaactggc ttcgggcagt tgtgacctct aactgtaatt tccttgcttc ttctgtatgt 180
ttccacctct tgtgctgtgc gcctagccaa atcagggtgc tcttgataaa aattcttctc 240
aaatttaggc agctcatcaa gattccactt ctttttaact aatttctccc cagggtttcc 300
aaacttcttt ccagataagg gccctgccct acttcctc 338

<210> 412
<211> 350
<212> DNA
<213> Homo sapiens

<400> 412
ggaccgaggg tttggtgcac ctcgatttgg aggaagtagg gcagggccct tatctggaaa 60
gaagtttgga aaccctgggg agaaattagt taaaaagaag tggaatcttg atgagctgcc 120
taaatttgag aagaattttt atcaagagca ccctgatttg gctaggcgca cagcacaaga 180
ggtggaaaca tacagaagaa gcaaggaaat tacagttaga ggtcacaact gcccgaagcc 240
agttctaaac aattattttt actaaaatgc ataattatgt gatagttata catataccaa 300
cctgttatgt gagacaagct gacctgcaag tagtccaagg ccagtgaatc 350

<210> 413
<211> 341
<212> DNA
<213> Homo sapiens

<400> 413
aggtactggc aaaaaaagat gctcggtggt tccagcagaa gccaggccag gcccctgtgt 60
tagtgatgta taaagacagc gagcggccct cagggatctc tgagcgattc tccgactcca 120
gttcacggac cacagtcacc ttgaccatca gtggggccca cgttgaggat gaggctgact 180
attactgtta ctgtgcggcc gcggtctcgg tcactcgaat aacccgacat ggcgtcaatg 240
gttgcggttg gcggggaacg aagtatatag aaaagcgtgc gacaagtcgc tggaaatggc 300
ctcgatgacg gcgaagcctt gcgggggcgg cagcggagga a 341

<210> 414
<211> 258
<212> DNA
<213> Homo sapiens

<400> 414
aggtacagca tttcctggag gatctctgga gcgatatagt ctggcgtgcc acagaatgtg 60
gccgtggtga caccattgca aatcccctcc ttgcacattc cgaagtctgc cagtttacag 120
tgaccctcgt ggtccaacag gacattgtcc agtttcagat ctctcatact cagcctatac 180
cccatcctcc actctagcac ccatctctac ccatcagagt cagaatgaac acccataggg 240
gaggtggcca ctgtgtgc 258

<210> 415
<211> 436
<212> DNA
<213> Homo sapiens

<400> 415
ccgcggtggc ggcccgaggt actggcaaaa aaatatgctc ggtggttcca gcagaagcca 60
ggccaggccc ctgtactggt gatttataaa gacaatgagc ggccctcagg gatccctgag 120
cgattctccg gctccagctc acggaccaca gtcaccttga ccatcagcgg ggcccacgtt 180
gaagatgagg ctgactatta ctgttactct gaggctgaca acaatagggt gttcggcggg 240
gggaccaagc tgaccgtcct aggtcaagcc caaggctgcc ccctcggtca ctctgttccc 300
gccctcctct gaggagcttc aagccaacaa ggccacactg gtgtgtctca taagtgactt 360
ctacccggga gccgtgacag tggcctggaa ggcagatagc aaccccgtca aggcgggagt 420
ggagaccacc acaccc 436

<210> 416
<211> 473
<212> DNA
<213> Homo sapiens

<400> 416
acttagggcg aattggagct ccccgcggtg gcggccgagg tactacccct tccccaaccc 60
cagggaatgc agctcctgac tccaaaagag acccttcctt cctcttgggg agaggaggga 120
gaagagtaaa gaggactttg tcttgcattg aagtcctctt tgatgagtgg ggattcctag 180
ctcccagaaa ccatttttag aaacaccctg ggccagaagg gaacctgctg ccatgaagga 240
aaggacccag tccttgcgga atacgtcacc tgctgactaa agatcccttg ggccttgaat 300
aaccagcagc aatatccaag tagtatacca tgggccttgg gtgaaactct gagactttct 360
ggctccaggt gaaacccagc atattgccag ctgtggtggc tatagtgaga gacttcttct 420
gcttgagaaa agctgaagga aaaataaagc agtatttgcc ttgtacctgc ccg 473

<210> 417
<211> 145
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 113, 121
<223> n = A,T,C or G

<400> 417
ctacttaggg cgaattggag ctcnccgcgg tggcggccgc agaaggtccc ggcagcagca 60
ggaagaagac ggaccccgcg atgagggcgg cggcaaggag caccttcatg ttnggttcgg 120
naaggcgcag catccccgcg tacct 145

<210> 418
<211> 337
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 309
<223> n = A,T,C or G

<400> 418
aggtacacaa accgtatgtt aagtagcgca gccagcagct caccacaggg aaaaacagca 60
tctgcaaaaa cgatgtcaaa tcttgactct tgtagttttt ttcataactt tcttatttga 120
aactacatct ttacagaagt ttctaaatat gtcatataat tcccacacga gcggccgccc 180
gggcaggtac ttgttgttgc tttgtttgga gggtgtggtg gtctccactc ccgccttgac 240
ggggctacta tctgccttcc aggccactgt cacggctccc gggtagaagt cacttatgag 300
acacaccant gtggccttgt tggcttgaag ctcctca 337

<210> 419
<211> 571
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 542
<223> n = A,T,C or G

<400> 419
cgagatactg tccaactgga tgctgccctg gtggctgaag gcacacttca tgatgctgtc 60
cagggtcatc agggagacat gttgaaagag ctccagacgt gagttttggg caatgtgttc 120
ctcccatttg ttcagcatca tccgaacact ctcagacatc atggtgatga atattttcag 180
aatgctgatg ttgaagccag gtttcacaat ctggcggtgc tttttccatt tagaaccatc 240
cagggtcaca agtcctcgac caacccagga ttcaaggatt ttgtggctaa cagcactttt 300
gggatcttgt cttttcagga gaatcttggc atagtctggg tcatggacac tgaagaacat 360
cgtaaagggt ccaacccaca agggaacagc acatgggtat ttttccatca gcttatgata 420
cacctcaaac tcctttactg ggtaaaactc cttgtggcca tagaaccagt gggcaggggg 480
tgcaggaaac aggtgcaggg ctctgatcat ccatctcctc ctctggtacc tgcccgggcg 540
gnccgctcta gaactagtgg gatcccccgg g 571

<210> 420
<211> 383
<212> DNA
<213> Homo sapiens

<400> 420
ccgcggtggc ggcccgggac cgagggtttg gtgcacctcg atttggagga agtagggcag 60
ggcccttatc tggaaagaag tttggaaacc ctggggagaa attagttaaa aagaagtgga 120

atcttgatga gctgcctaaa tttgagaaga atttttatca agagcaccct gatttggcta 180
ggcgcacagc acaagaggtg gaaacataca gaagaagcaa ggaaattaca gttagaggtc 240
acaactgccc gaagccagtt ctaaacaatt atttttacta aaatgcataa ttatgtgata 300
gttatacata taccaacctg ttatgtgaga caagctgacc tgcaagtagt ccaaggccag 360
tgaatcaatt actgcttgta cct 383

<210> 421
<211> 386
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 210
<223> n = A,T,C or G

<400> 421
cgcggtggcg gcncgggacc gagggtttgg tgcacctcga tttggaggaa gtagggcagg 60
gcccttatct ggaaagaagt ttggaaaccc tggggagaaa ttagttaaaa agaagtggaa 120
tcttgatgag ctgcctaaat ttgagaagaa tttttatcaa gagcaccctg atttggctag 180
gcgcacagca caagaggtgg aaacatacan aagaagcaag gaaattcagt tatgaggtca 240
caactgcccg aagccagttc taaacaatta tttttactaa aatgcataat tatgtgatag 300
ttatacatat accaacctgt tatgtgagac aagctgacct gcaagtagtc caaggccagt 360
gaatcaatta ctgcttgtac ctcggc 386

<210> 422
<211> 590
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 448, 532
<223> n = A,T,C or G

<400> 422
ccgcggtggc ggcccgcccg ggcaggtact gtccaactgg atgctgccct ggtggctgaa 60
ggcacacttc atgatgctgt ccagggtcat cagggagaca tgttgaaaga gctccagacg 120
tgagttttgg gcaatgtgtt cctcccattt gttcagcatc atccgaacac tcttagacat 180
catggtgatg aatattttca gaatgctgat gttgaagcca ggtttcacaa tctggcggtg 240
ctttttccat ttagaaccat ccagggtcac aagtcctcga ccaacccagg attcaaggat 300
tttgtggcta acagcacttt tgggatcttg tcttttcagg agaatcttga catagtctgg 360
gtcatggata ttgaaagaac atcgtaaagg gtccaaccca caagggaacg gcacatgggt 420
atttttccat cagctcagga tacacctnaa actcttttac tgggtaagac tccttggggc 480
cataaaccag tgcgcagggg ggtgcaggga aaccaggtgc atggcttctg ancggccatc 540
tcctcctctg gtaccttcgg ggcgcttcta gaactagtgg gatccccсgg 590

<210> 423
<211> 226
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 77, 93, 108, 137, 202, 215, 217, 225, 226
<223> n = A,T,C or G

<400> 423
gcaggtacag cctgggctcc agagtcagcc tctacactca ccagactatg gcggattcat 60

cattatactg ggaagcnaca gcctgggccc canagttggt catccgtnca tgcacagatg 120
aggagaggtc tcaggangct ttggccgtgg tctgggacct tacctctttg tgtaatgagt 180
tgtttggtgt gaggcccaga tnacaagggc ccccncntac ctcgnn 226

<210> 424
<211> 467
<212> DNA
<213> Homo sapiens

<400> 424
tagggcgaat tggagctccc cgcggtggcg gcccgaggta ctgcctggag cacgacatcc 60
agcccagtgg caccatgccc agccacaagg ccctggggag cagtgataac tccttcaaca 120
ccttcttcag ggagacccag cctggcaggc atgtgtcctg ggctgtctgt ggacctggag 180
cctgctgtca taggttggca tcaactacca gtcccccaca gtggtgcccg ggggtgctgt 240
agccaaggtg cagcgggcag tctgcgtgct aaacaatacc acagccatca ctgaggcctg 300
ggcccgcctc aaccaaaagt ttgacctgat gtatgccaag cgggcattta tgcactgtta 360
tgtggacagg ggcatggagg aaggtgtcga gcggccgccg ggcaggtact acagcctggg 420
tgactgagtg aggctctttc tcaaaaaaaa aaaaaaaaag aaaaaag 467

<210> 425
<211> 553
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 518, 536
<223> n = A,T,C or G

<400> 425
ccgcggtggc ggcccgcccg ggcaggtacc agaggaggag atggacgatc agagccatgc 60
acctgtttcc tgcacccccct gcgcactggt tctatggcca caaggagtct tacccagtaa 120
aagagtttga ggtgtatcct gagctgatgg aaaataccta tgtgccgttc ccttgtgggt 180
tggacccttt acgatgttct tcaatatcca tgacccagac tatgtcaaga ttctcctgaa 240
aagacaagat cccaaaagtg ctgttagcca caaaatcctt gaatcctggg ttggtcgagg 300
acttgtgacc ctggatggtt ctaaatggaa aaagcaccgc cagattgtga aacctggctt 360
caacatcagc attctgaaaa tattcatcac catgatgtct aagagtgttc ggatgatgct 420
gaacaaatgg gaggaacaca ttgcccaaaa ctcacgtctg gagctctttc aacatgtctc 480
cctgatgacc ctggacagca tcatgaaagt gtgccttnag ccaccagggc agcatncagt 540
tggacagtac ctt 553

<210> 426
<211> 525
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 424
<223> n = A,T,C or G

<400> 426
gactactata gggcgaaatt ggagctcccc gcggtggcgg cccgaggtac aggacattcc 60
tctgctccta ttgcccctgt ttccgttctt ttcacactgt ctgtgggtgc tgtgccctgt 120
tggaactctc tttaacgtct tacgttggag ccgctaacct tccccaggtg tttgtcttca 180
ttgctttcac agggaaagaa ttactcgtcc cactgacgag ttctatgtat gtccctggga 240
agctgcatga tgtggaacac gtgctcatcg atgtgggaac tgggtacctg cccggcggc 300
cgaggtacgc gggaatgagg ccattgctga acttgatcac tgaatgaaga ctcatacaaa 360
gacagcaccc tcatcatgca gttgcttaga gacaacctaa cactttggac atcagacagt 420

gcangagaaa gaatgtgatg cggcagaagg ggctgaaaac taaaatccat acagggtgtc 480
atccttcttt cctttaaaga aacctttta cacaatcttc cattc 525

<210> 427
<211> 483
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 472
<223> n = A,T,C or G

<400> 427
gacacggctt cctgggcggt cccctccacc tgttgcttca ggtcctgcaa gcccttgctt 60
gccatggctt cggggtatct gtggagtcgt caagagcagc tggagcgacg ttggatcctg 120
cccagagtgg cccccgcgta cctcggccgc ccgggcaggt acaagcttac aaaactcaga 180
ccactcacca gaaaaaaatc ggcatttata tagttgtgtt acttttggtt tcctgcatct 240
tttcacatct ggctcattta catcattttc ttcatcttcc aaagtggagt tagctactac 300
attaggtaag gttacttcat caatcaccat actgttataa tcttgaaagt gaatttcttt 360
ggaccctccc ttgaatgcag ttatacctag taaacctgat ccacaaccaa gatccaagac 420
ttttttccca gcaaatttca ctttggcctt tgtgaaataa agccaggagg gnaaaagggt 480
cct 483

<210> 428
<211> 372
<212> DNA
<213> Homo sapiens

<400> 428
cgggcaggta caagcagtaa ttgattcact ggccttggac tacttgcagg tcagcttgtc 60
tcacataaca ggttggtata tgtataacta tcacataatt atgcatttta gtaaaaataa 120
ttgtttagaa ctggcttcgg gcagttgtga cctctaactg taatttcctt gcttcttctg 180
tatgtttcca cctcttgtgc tgtgcgccta gccaaatcag ggtgctcttg ataaaaattc 240
ttctcaaatt taggcagctc atcaagattc cacttctttt taactaattt ctccccaggg 300
tttccaaact tctttccaga taagggccct gccctacttc ctccaaatcg aggtgcacca 360
aaccctcggt cc 372

<210> 429
<211> 182
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 12
<223> n = A,T,C or G

<400> 429
atagggcgaa tnggagctcc ccgcggtggc ggccgaggta cgcgggaaga tctacactat 60
tatgtcaccc cagaaagtga actctcagtc ttcccagcca gtctctttct tatcataggt 120
tagcttgctt attctggaat ttcgcgtata cagatgcatg ccatgccata ggtacctgcc 180
cg 182

<210> 430
<211> 517
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 484
<223> n = A,T,C or G

<400> 430
ccgcggtggc ggccgaggta caccgactac ggcggactaa tcttcaactc ctacatactt 60
cccccattat tcctagaacc aggcgacctg cgactccttg acgttgacaa tcgagtagta 120
cctgcccggg cggccgcccg ggcaggtact cttgctgctt ggttgattaa taaagcggga 180
cgtccctttg agcagcctca agaatatgat gaccctaatg caacaatatc taacatacta 240
tccgagcttc ggtcatttgg aagaactgca gattttcctc cttcaaaatt aaagtcaggt 300
tatggagaac atgtatgcta tgttcttgat tgcttcgctg aagaagcatt gaaatatatt 360
ggtttcacct ggaaaaggcc aatataccca gtagaagaat tagaagaaga aagcgttgca 420
gaagatgatg cagaattaac attaaataaa gtggatgaag aatttgtgga agaagagaca 480
gatnatgaag aaaactttat tgatctcaac gtttta 517

<210> 431
<211> 497
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 468
<223> n = A,T,C or G

<400> 431
tcgagcggcc gcccgggcag gtacccttgc tgatgtgggt cttcagctcc tcttctgaat 60
actccacctt gggccttttg ttccagaacc ttcattatcg tgttttctct tggtaacttt 120
cccttcagga ttgtaatctg gtgggtaaac aagctcctta aactcatcca ccaaggagcc 180
cagtctttta ttcattgctt caaccttggg caatgtcagg tccactgctt gttccggctc 240
catcaaatcc aaggccaagg cctccaggtt cctgaagtgc tgctgcagca cggggttctc 300
aaagctgtca cttctgtacc tcggccgagg tacaaactcg cattcatggc ttggtttccc 360
agaagatctc catttaactt ttttaaagaa agtttattgc tttctttaac ctgcattttt 420
tctaagtttt ttttcacata aaggtgctgt ctttgtggca aggcctangc atgacaatcg 480
gaggactcga gggggat 497

<210> 432
<211> 368
<212> DNA
<213> Homo sapiens

<400> 432
ccgcggtggc ggccgttaag gacagttgtg gcaaaggaga aatggtcaca gggaatgggc 60
ggcggctcca cctggggatt cctgaggccg tgtttgtgga agatgtagat tccttcatga 120
aacagcctgg gaatgagact gcagatcagt attaaagaag ctggatgaac agtacctcgg 180
ccggctgtta tgttcatcat ggcacttaag agatgcttaa caaacctttc ctacaatgtt 240
cctcagattt tcagagctta tttgatctag catctggttc ctaaattctg agtcacatca 300
gaagccaaac ttgaatgctt ttggaaagag ctagcctcat accacttcag ttgggaaggg 360
gagtacct 368

<210> 433
<211> 475
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 339, 356, 378, 388, 392, 397, 430, 458

<223> n = A,T,C or G

<400> 433
ggagctcccc cgcggtggcg gccgaggtac tgtccaactg gatgctgccc tggtggctga 60
aggcacactt catgatgctg tccagggtca tcagggagac atgttgaaag agctccagac 120
gtgagttttg ggcaatgtgt tcctcccatt tgttcaacat catccgaaca ctctcagaca 180
tcatggtgat gaatattttc agaatgctga tgttgaagcc aggtttcaca atctggcggt 240
gctttttcca tttagaacca tccagggtca caagtcctcg accaacccgg gattcaagga 300
ttttgtggct aacagccttt tgggatcttg tcttttcang agaatcttgg cattantttg 360
ggtcatggga cactgaanaa catcgttnag gnttcanccc acagcgggaa acagcacatg 420
ggtatttttn catcagctta tgatacacct tcaaactnct ttactgggta aaacc 475

<210> 434
<211> 740
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 546, 654, 660, 699, 718, 724, 731
<223> n = A,T,C or G

<400> 434
ccgcggtggc ggccgaggta ccaaaaagac tctcaaaaac caatactccc acgggcaagg 60
gaatagccaa gtttgttgcg gtttccaatg aatgacatca gccctgtgta ggtctcaatc 120
aaaatgggtt cagttaacac catcagtttt ttcctcttcc agatccagtt gaattcttgt 180
gggcattctg gatagctgga acaagcttag acatgaaccc agacaacttg caaatttcaa 240
ggaatttctc actggtgtat ttcataggat gctcagtgaa agtagcataa ggaacttcag 300
tggaccatgg gttccagcgg gacagaagag gctgctcctc cggactcccc cagtagatcc 360
taaggccttc tccttgtctc ttgtccaggg acatcccagg gaaggtgaac ttgcccaggc 420
agatgcgata gacagcgctc agaggaatcc gcttgcagct gcacacaact cagcatgatg 480
aagtcgtatt tgcagatcaa ggagaagtct tgttgtgacc agtaagaatt ctctccttct 540
cattgntcca gtgggtctat ctttgtcaag agccagaagc cttgaatggt cttttcagaa 600
gtcttaactt ccgtgacctt tcaagtcttt catggcagtc ttaatgggcc cccnggccgn 660
tctagaacta gtgggatccc ccgggctgca aggaatttna ttacaaagct tatcgatncc 720
ggcnaacctc nagggggggc 740

<210> 435
<211> 390
<212> DNA
<213> Homo sapiens

<400> 435
cgcggtggcg gcccgcccgg gcaggtacag ggcagtaatt gattcactgg ccttggacta 60
cttgcaggtc agcttgtctc acataacagg ttggtatatg tataactatc acataattat 120
gcattttagt aaaaataatt gtttagaact ggcttcgggc agttgtgacc tctaactgta 180
atttccttgc ttcttctgta tgtttccacc tcttgtgctg tgcgcctagc caaatcaggg 240
tgctcttgat aaaaattctt ctcaaattta ggcagctcat caagattcca cttcttttta 300
actaatttct ccccagggtt tccaaacttc tttccagata agggccctgc cctacttcct 360
ccaaatcgag gtgcaccaaa ccctcggtcc 390

<210> 436
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 256, 281

<223> n = A,T,C or G

<400> 436
ccgcggtggc ggccgaggta ctgtccaact ggatgctgcc ctggtggctg aaggcacact 60
tcatgatgct gtccagggtc atcagggaga catgttgaaa gagctccaga cgtgagtttt 120
gggcaatgtg ttcctcccat ttgttcagca tcatccgaac actcttagac atcatggtga 180
tgaatatttt cagaatgctg atgttgaagc caggtttcac aatctggcgg tgcttttcc 240
atttagaacc atccanggtc acaagtcctc gaccaaccca ngattcaagg attttgtggc 300
taacagcact tttgggatct tgtcttttca ggagaatctt gacatagtct gggtcatgga 360
tattgaagaa catcgtaaag ggtccaaccc acaagggaac ggcacatagg tatttttcca 420
t 421

<210> 437
<211> 599
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 350, 439, 525, 528, 551, 568, 592, 597
<223> n = A,T,C or G

<400> 437
cggcccgagg ttatcgttag gcatctccca ngcgaccggc tccgcagcaa gatggcggac 60
gagaaggaca gggaagagat aatagtagca gaatttcaca aaaaaatcaa agaggcattt 120
gaagtctttg accatgagtc gaataataca gtggatgtga gggagattgg aacaattatc 180
aggtcattag gatgctgtcc tacggaagga gagctgcatg atctgattgc agaggtagag 240
gaagaaagaa cctactggat acattccgat tcgaaaaatt tcttcccgtg atgacagaaa 300
tactactaga aagaaaatac agaccaattc cagaaagatg tccttcttcn agcttttgag 360
gttttagatt caactaaacc tgggtttctt actaagggcc gagctgatca agtatatgac 420
tgaagaagat ggagtttcnc tccctcgccc agctgaaatg ccagtggcgt gatcttggct 480
cgttgcaacc ctcaccctcc cggttcaagc cattcttcct gcctnaancc ttctgagcaa 540
ctgggattgg naggccacac ccaacacncc tggctaaatt tctgtatttt tngggana 599

<210> 438
<211> 126
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 94, 100, 101, 102, 106, 107, 110, 112, 113
<223> n = A,T,C or G

<400> 438
cgtggcccgt ggctcacgtg gcccctaagt ttccgggtct tcctcagtct ggatggcatg 60
ttggcagccc agacgaaaaa gccccgcgta cctnggccgn nnaaannttn tnnatcctcc 120
gggctg 126

<210> 439
<211> 146
<212> DNA
<213> Homo sapiens

<400> 439
ccgcggtggc ggccgttaaa catgtgtcac tgggcaggcg gtgcctctaa tacaggtgat 60
gctagaggtg atgtttttgg taaacaggcg gggtaagatt tgccgagttc cttttacttt 120
ttttaaccct tccttcccgc gtacct 146

<210> 440
<211> 45
<212> DNA
<213> Homo sapiens

<400> 440
aggaatttcg atatccaagc ttatcgaata cccgtcgacc tcgag 45

<210> 441
<211> 266
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2
<223> n = A,T,C or G

<400> 441
ancactactt agggcgaatt ggagctcccc gcggtggcgg ccgaggtacg cggggacctc 60
attcatttct accggtctct agtagtgcag cttcggctgg tgtcatcggt gtccttcctc 120
cgctgccgcc cccgcaaggc ttcgccgtca tcgaggccat ttccagcgac ttgtcgcacg 180
cttttctata tacttcgttc cccggcaaac cgcaacccat ttgacgccaa tgtcggggtt 240
attccgagtt gaccgaagac cgcggc 266

<210> 442
<211> 238
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 178, 187
<223> n = A,T,C or G

<400> 442
ccgcggtggc ggccgccatg gagcagccgc cggcgcctaa gagtaaacta aaaaagctga 60
gtgaagacag tttgactaag cagcctgaag aagtttttga tgtattagag aagcttggag 120
aagggtctta tggaagtgta tttaaagcaa tacacaagga atccggtcaa gttgtccnca 180
atttaancaa agtcccttgg gccgctctta gaaactagtg ggatcccccg ggctgcag 238

<210> 443
<211> 213
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 177, 181, 182, 191, 206
<223> n = A,T,C or G

<400> 443
ccgcggtggc ggccgaggta cacgtctctg tctgggcctc ggccagggtg ccgagggcca 60
gcatggacac caggaccagg gcgcagatca ccttgttctc catggtggcc attgcctcct 120
ctctgctcca aaggcgaccc cgagtcaggg atccccgcgt acctgcccgg gcggccngtt 180
nnaaaaacta ntggatcccc cgggcntgca gga 213

<210> 444
<211> 190

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 155, 161, 183
<223> n = A,T,C or G

<400> 444
ccgggcaggt acgcggggag gccgtaggag gaagatggcg gtggagtcgc gcgttaccca 60
ggaggaaatt aagaaggagc cagagaaacc gatcgaccgc gagaagacat gcccactgtt 120
gctacgggtc ttcaccacca ataacggccg ctctngaact ngttggatcc cccgggcctg 180
canggaattc 190

<210> 445
<211> 139
<212> DNA
<213> Homo sapiens

<400> 445
cttagggcga attggagctc cccgcggtgg cggccgtgca tcatcatgga gttagtgagg 60
cgctccacaa tgggacactg agctttgcgg aagcgtttgg cggcataccg ccctgcactg 120
tgaggcaggt acctgcccg 139

<210> 446
<211> 51
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 10, 11, 38
<223> n = A,T,C or G

<400> 446
tatttnaatn ncccgtccac ccttcgaggg gggggggncc gggtacccag c 51

<210> 447
<211> 31
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6
<223> n = A,T,C or G

<400> 447
attgcncgct tgggcgtaaa tcatgggtca t 31

<210> 448
<211> 70
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 46, 56
<223> n = A,T,C or G

<400> 448
cgctccacaa atttccacac caacataccg aanccggggg agccantaaa aagttnttaa 60
aagccctggg 70

<210> 449
<211> 269
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23, 203, 217, 220, 235
<223> n = A,T,C or G

<400> 449
actatagggc gaattggagc tcnccgcggt ggcggccgcc cgggcaggta cccaatagtg 60
gatgggaagc tttccatcca gtgctacttg cgggccttgg atcgatgtta cacatcatac 120
cgtaaaaaaa tccagaatca gtggaagcaa gctggcagcg atcgaccctt caccсttgac 180
gatttacagt acctcggccg ctnttaaaac tagttgnatn cccccgggcc tgcanggaat 240
tccgatatca aagctttatc gataccgtc 269

<210> 450
<211> 448
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 115, 144, 145, 146, 147, 153, 209, 217, 224, 287, 373, 402, 424, 429
<223> n = A,T,C or G

<400> 450
cgactnctta gggcgaattg gagctccccg cggtggcggc cgcccgggca ggtgctgtga 60
gtgctctggc gaagtttgga gcccagaatg aagagatgtt acccagtatc ttggngttgc 120
tgaagaggtg tgtgatggat gatnnnnatg aantaaggga ccgagccacc ttccacctaa 180
atgtcctgga gcagaagcag aaagccccnt taattcnagg cttntatcct aaaatggtct 240
gactgttgtc catccctggt ctggagagga ctctgcagca gtacctnggc cgcccgggca 300
ggtacaaaat gatttcccaa agttcttgaa gtgccttgag aacatgtggg tccgagttgt 360
tataacagac tcntcccccg ggtcaccttt tgcctggtca tnctgttaga gtacctttgg 420
ccgntctana actagtggga tccccсgg 448

<210> 451
<211> 156
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 113, 147, 151
<223> n = A,T,C or G

<400> 451
cgactactta gggcgaattg gagctccccg cggtggcggc cgaggtacgc ggggaggagg 60
tcgagagtcg ttcttctctt tgcacagacg tgactctgca gctctttaac ggngcccgct 120
gctctcaacc cagcttaccc cactttntcc natggc 156

<210> 452

<211> 33
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 11, 15
<223> n = A,T,C or G

<400> 452
ttnaaacttt nttcnatacc cgtccgacct cga 33

<210> 453
<211> 131
<212> DNA
<213> Homo sapiens

<400> 453
atttgtttat cccgctcaca attccacaca aacaataccg aagcccgggg aagccataaa 60
aagtgtaaag gccttggggg tgcctaatgg agtgagctta actcacatta attgcgttgc 120
cgctcactgc c 131

<210> 454
<211> 339
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 70, 71, 73, 109, 119, 120, 156, 161, 167, 170, 171, 173,
179, 208, 217, 219, 222, 226, 243, 264, 273, 277, 280, 282,
319
<223> n = A,T,C or G

<400> 454
aggtaccttc tggggcatac aacgtggcag cagggcctcg ggaagagggg taggaggacc 60
gagcagcaan ngngtgtctt aggaagacag gaaaaaaaaa cccttttgnc acacatgcnn 120
ggagggttgt ccctgaaaag aagggcaggt tggganaggt ncccctngtn ncntttaana 180
aaaaaaggcc ccccaggtgg gccaaaanaa gccaccnant tnaaangtag gggaattgaa 240
tcnatataaa aaaaaacaaa atcnaccgcc canaaantan angggaacca aaattcaatc 300
cttttccacc gggttttcnt tttcccaacc caagaaaaa 339

<210> 455
<211> 418
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 366
<223> n = A,T,C or G

<400> 455
aattggagct ccccgcggtg gcggccggga ccgagggttt ggtgcacctc gatttggagg 60
aagtagggca gggccccttat ctggaaagaa gtttggaaac cctggggaga aattagttaa 120
aaagaagtgg aatcttgatg agctgcctaa atttgagaag aatttttatc aagagcaccc 180
tgatttggct aggcgcacag cacaagaggt ggaaacatac agaagaagca aggaaattac 240
agttagaggt cacaactgcc cgaagccagt tctaaacaat tatttttact aaaatgcata 300
attatgtgat agttatacat ataccaacct gttatgtgag acaagctgac ctgcaagtag 360

tccaangcca gtgaatcaat tactgcttgt cctcggccgc tctagaacta agtggatc 418

<210> 456
<211> 169
<212> DNA
<213> Homo sapiens

<400> 456
cgaattggag ctccacccgc ggtggcggcc cgcccgccat gggaccacgt ggggtaagtt 60
gggttgagag cagcgggcgc cgttaaagag ctgcagagtc acgtctgtgc aaagagaaga 120
acgactctcg acctcctccc cgcgtacctc ggccgctcta gaactagtg 169

<210> 457
<211> 227
<212> DNA
<213> Homo sapiens

<400> 457
cgcccgggca ggtacagcct gggctccaga gtcagcctct acactcacca gactatggcg 60
gattcatcat tatactggga agcaacagcc tgggccccag agttggtcat ccgtccatgc 120
acagatgagg agaggtctca ggaagctttg gcgtggtctg ggaccttacc tctttgtgta 180
atgagttgtt tggtgtgagg cccggtcaca agggcccccg cgtacct 227

<210> 458
<211> 331
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 249, 318
<223> n = A,T,C or G

<400> 458
cgcggtggcg gcccgcccgg gcaggtacac tgccaaaccc gcagaagtgc ccagggaaag 60
ccccgcgggg gctgcggata gtcacggctg atggaaagct gacagcggaa caaggacgca 120
acgtcactct catggtgcaa ttagaagagg gtgatgttca gccggacact catccaagtg 180
gactttggcg atggtatcgc ggtgtcttac gtcaatctca gctccatgga agatgggatc 240
aaacacgtnt atcagaacgt gggcattttc cgtgtgaccg tgcaggtgga caacagtctg 300
ggttctgaca gcgccgtnct gtaccttcgg c 331

<210> 459
<211> 70
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27, 45, 48
<223> n = A,T,C or G

<400> 459
tgatatcaag cttatcgata ccggtcnacc tctagggggg gcccnggncc caactttttg 60
ttccctttag 70

<210> 460
<211> 138
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 86
<223> n = A,T,C or G

<400> 460
ttaggcgaat ggactccacg cggtggcggc cgtccgggca ggtaccagga tgtccagtgc 60
gaccatcttt tccagcaggg ccaganggac cagcagggcc cctaggacca gcaggaccca 120
cggagccagg agcacctt 138

<210> 461
<211> 48
<212> DNA
<213> Homo sapiens

<400> 461
gaatgccttg tgggccacta ggacctcttg ggccaacccc gcgtacct 48

<210> 462
<211> 281
<212> DNA
<213> Homo sapiens

<400> 462
cgaattggag ctccccgcgg tggcggccgc ccgggcaggt acctgcggag gcagcggctg 60
ctgcgggacc tgcgcccctt cccagcgccc cccacccact ggttccttgg gcaccagaag 120
tttattcagg atgataacat ggagaagctt gaggaaatta ttgaaaaata ccctcgtgcc 180
ttccctttct ggattgggcc ctttcaggca tttttctgta tctatgaccc agactatgca 240
aagacacttc tgagcagaac agatcccaag tcccagtacc t 281

<210> 463
<211> 242
<212> DNA
<213> Homo sapiens

<400> 463
ggcgaattgg agctccccgc ggtggcggcc gccgggcagg tactttactg cacccagcag 60
actttcaaca actcattgat ccaaagatac atgcacagtc tgagcaccag ctatggtgct 120
cataacttct ttaagacttg aaccctttca atctgtgtga ttcattaaat tggaccattg 180
atgataagaa tacacattgt atgtttctgt gcacatgaca gtgtgtgtgt gtgcacgtac 240
ct 242

<210> 464
<211> 451
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 39, 105, 331, 386, 440
<223> n = A,T,C or G

<400> 464
aggtactggc aaaaaaaata tgctcggtgg ttccagcana agccaggcca ggcccctgtt 60
ctggtgattt ataaagacgg tgagcggccc tcagggatcc ctgancgatt ctccggctcc 120
agttcacgga ccacagtcac cttgaccatc agcggggccc accttgagga tgaggctgac 180
tattactgtt actctacgac tgacaacaat ggggtgttcg gcggagggac caagctgacc 240
gtcctacgtc agcccaaggc tgccccctcg gtcactctgt tcccgccctc ctctgaggag 300

cttcaagcca acaaggccac actggtgtgt ntcataagtg acttctaccc gggaaccgtg 360
acagtggcct ggaaggcaga tagcancccc gtcaaggcgg gagtggagac caccacaccc 420
tccaaacaaa gcaacaacan gtacctgccc g 451

<210> 465
<211> 414
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 256, 264, 391, 394, 403
<223> n = A,T,C or G

<400> 465
acatggatgg ctctcaagac agccctatct ttatgtatgc ccctgagttc aagttcatgc 60
caccaccgac ttatactgag gtgaggattg tcatctttac tgttaaattt gtcctaagct 120
ttctataaga agttgactta gacggattgc taaactggtt tgttcttttt gttcttacct 180
gaactgaaat agtctgtttc tttctttagg tggatccctg catcctcaac aacaatgtgc 240
agtgagcatg tggaanaaaa gaancagctt tacctacttg tttctttttg tctctcttcc 300
tggacactca ctttttcaga gactcaacag tctctgcaat ggagtgtggg tccaccttag 360
cctctgactt cctaatgtag gaggtggtca ncangcaatc tcntgggcct taaa 414

<210> 466
<211> 145
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 28, 34, 35, 37, 38, 40, 41, 51, 70, 101
<223> n = A,T,C or G

<400> 466
gcgcgtaata cgactactat agggcgantt gaanntnnan ncggccgagg naccttgatc 60
tcctggcggn ggctcgtccc tggtcttagt tccaccgggc ngcgggagtc aggaccgcct 120
gtcctcagac ccctccgcag cgact 145

<210> 467
<211> 640
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 99, 103, 116, 131, 158, 167, 174, 197, 202, 213, 229, 230,
247, 250, 253, 257, 261, 267, 268, 285, 295, 305, 335, 341,
343, 350, 352, 353, 364, 365, 373, 383, 386, 403, 407, 437,
449, 465, 472, 473, 474, 483, 486, 491, 502, 513, 516
<223> n = A,T,C or G

<221> misc_feature
<222> 519, 526, 542, 544, 546, 548, 584, 591, 596, 614, 616, 618,
619, 621
<223> n = A,T,C or G

<400> 467
ccgcggtggc ggccgaggta cttttttttt tttttttttt ttttttattt tttttttttt 60
tttttttttt ttttttgctc taaaggggggt agagggggng ctntagggta aatacnggcc 120

ctatttcaaa natttttagg ggaattaatt ttaggacnat gggcatnaaa ctgnggtttg 180
ctccacaaat ttcaaancat tntcgagcgg ccncccgggc aggtacttnn tttttttttt 240
tttttnggn ggnaatnttg ntttgtnncc caagctggag tgcantggca tggtntttgg 300
ttaantgcaa ccttcacctt tcctagttta aagcnatttt ntnctgcctn anncctcccc 360
taannagctt ggngattaca ggnaanatgc cccccaatag ccngggnaaa atttttgga 420
atttttagca aaaaaanaag ggtttttcnc cattgcttgg cccanggctt annntttaaa 480
aanttncctg nccctttaaa gnggaatctt ggnccnccnt ttgggnccgt tttttaaaaa 540
antngntngg aattcccccc cggggctttg gagggaaaat tttnaatttt ncaaanccttt 600
tattttaatt cccngncnna ncctttgagg gggggggggc 640

<210> 468
<211> 634
<212> DNA
<213> Homo sapiens

<400> 468
aggtactgtc caactggatg ctgccctggt ggctgaaggc acacttcatg atgctgtcca 60
gggtcatcag ggagacatgt tgaaagagct ccagacgtga gttttgggca atgtgttcct 120
cccatttgtt cagcaccatc cgaacactct cagacatcat ggtgatgaat attttcagaa 180
tgctgatgtt gaagccaggt ttcacaatct ggcggtgctt tttccattta gaaccatcca 240
gggtcacaag tcctcgacca acccaggatt caaggatttt gtggctaaca gcactttgg 300
gatcttgtct tttcaggaga atcttggcat agtctgggtc atggacactg aagaacatcg 360
taaagggtcc aacccacaag ggaacagcac atgggtattt ttccatcggc ttatgataca 420
cctcaaactc ctttactggg taaaactcct tgtggccata gaaccagtgg gcagggggtg 480
caggaaacag gtgcagggct ctgatcatcc atctcctcct ctggtacctg cccgggccgg 540
ccgctcgaag gtacgcgggt gaagaaaagg ctctaacatg agtttgatct tgagccccaa 600
tgttgaacaa gcttccagac ctttacaatt ttaa 634

<210> 469
<211> 431
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 188, 201, 306, 373, 376, 429
<223> n = A,T,C or G

<400> 469
ttgaggagag acacatgggt gggaaattgc aataaaaaga cggcccatag caangctgca 60
ttcccatggc tggccagagg aggaacgctt tgtgttctca tcggagctgc atgggaagtc 120
tgcatacagc aaagtgacct gcatgcctca ccttatggaa aggatggtgg gctctggcct 180
cctgtggntg gccttggtct nctgcattct gacccaggca tctgcagtgc aagcgaggtt 240
atggaaaccc cattgaagcc agttcgtatg ggctggacct ggactgcgga gctcctggca 300
ccccanaggc tcatgtctgt ttttgacccc tgtcagaatt acaccctcct ggatgaaccc 360
ttccgaagca cantanaact cagcagggtc ccatgggtgc gataaaaaca tgagcggctg 420
gtacctgcnc g 431

<210> 470
<211> 64
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 23, 40, 42, 46
<223> n = A,T,C or G

<400> 470

nggaatttaa tatcaagctt atngataccc gttctaaccn tnggangggg ggggccccgg 60
tacc 64

<210> 471
<211> 428
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 372
<223> n = A,T,C or G

<400> 471
tgtgggtgag ttggctgccg gtgagttggg tgccggtgga gtcgtgttgg tcctcagaat 60
ccccgcgtag ccgctgcctc ctcctaccct cgccatgttt cttacccggc ctgagtacct 120
cggccgcccg ggcaggtact gttttgagga gaaggatcag ctatccagcg actgtgagca 180
tgaacaagag ccaagcctag agacataatc atcttgaccc tctgagttac aggattcggc 240
ttattttctt cttcttctaa aactcgggca aaatggctga gctgccaaat tggacgaccc 300
tcgcggcttt cccgagaaag ctctaatacc aaggacacac aagctgggaa gaaagtcatg 360
aacacgaagt anttggcaag aactgacatg cagccaaagc agcacataat ttcaagctga 420
ccgtacct 428

<210> 472
<211> 279
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 25
<223> n = A,T,C or G

<400> 472
ccggncaggt acgcgggggc tgtangctca ggaggcagag ctctgaatgt ctcaccatgg 60
cctggatccc tctcctgctc cccctcctca ttctctgcac agtctctgtg gcctcctatg 120
agctgacaca gccatcctca gtgtcagtgt ctccgggaga gacagccagg atcacctgct 180
caggaaatgt acctcggccg aggtacgcgg gggcacttgg cttcaaagct ggctcttgga 240
aattgagcgg agagcgacgc ggttgttgta gctgccgct 279

<210> 473
<211> 415
<212> DNA
<213> Homo sapiens

<400> 473
aggtacctgc aggcctccta cacctacctc tctctgggct tctatttcga ccgcgatgat 60
gtggctctgg aaggcgtgag ccacttcttc cgcgaactgg ccgaggagaa gcgcgagggc 120
tacgagcgtc tcctgaagat gcaaaaccag cgtggcggcc gcccgggcag gtacttgttg 180
ttgctttgtt tggagggtgt ggtggtctcc actcccgcct tgacggggct gctatctgcc 240
ttccaggcca ctgtcacggc tcccgggtag aagtcactta tgagacacac cagtgtggcc 300
ttgttggctt gaagctcctc agaggagggc gggaacagag tgaccgaggg ggcagccttg 360
ggctgaccca ggacggtcag cttggtccct ccgccgaata ccacataaat acctt 415

<210> 474
<211> 369
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 80
<223> n = A,T,C or G

<400> 474
cgggaccgag ggtttggtgc acctcgattt ggaggaagta gggcagggcc cttatctgga 60
aagaagtttg gaaaccctgn ggagaaatta gttaaaaaga agtggaatct tgatgagctg 120
cctaaatttg agaagaattt ttatcaagag caccctgatt tggctaggcg cacagcacaa 180
gaggtggaaa catacagaag aagcaaggaa attacagtta gaggtcacaa ctgcccgaag 240
ccagttctaa acaattattt ttactaaaat gcataattat gtgatagtta tacatatacc 300
aacctgttat gtgagacaag ctgacctgca agtagtccaa ggccagtgaa tcaattactg 360
cttgtacct 369

<210> 475
<211> 227
<212> DNA
<213> Homo sapiens

<400> 475
ccgcggtggc ggccgcccgg gcaggtactt tactgcaccc agcagacttt caacaactca 60
ttgatccaaa gatacatgca cagtctgagc accagctatg gtgctcataa cttctttaag 120
acttgaaccc tttcaatctg tgtgattcat taaattggac cattgatgat aagaatacac 180
attgtatgtt tctgtgcaca tgacagtgtg tgtgtgtgca cgtacct 227

<210> 476
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 35, 39, 45, 120, 127, 130, 250, 261
<223> n = A,T,C or G

<400> 476
ccgggcaggt actanaagct gggggaaaaa gagtnggtna aacanacatg gccttggccc 60
ttctggaatt tacattctcg tatgtgtcat gaaagttgtt ttgaaaaaac ccaaaccatn 120
gtttttnctn tgctttcaca ctacaacaat caacacagaa gacttctgtg actccaaaaa 180
atatgtaagg atttctcccc accaccaggc aagcaatcag ttctgcagcg gacaccagtt 240
gggtgttctn caattcaatt ncaacactat ctacctagag acagcatcag atcccacagc 300
atgagggctc aatgcccaag ctgccccaca gccccctggg caccagtagc aagtctgggc 360
ctctggaact tctttttttg cagagatggg gtctcactat attgcccaga ctgggggctc 420
a 421

<210> 477
<211> 251
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 96, 98, 99, 100, 101, 103, 104, 118, 121, 139, 147, 150,
188, 210, 239, 250
<223> n = A,T,C or G

<400> 477
caccgccggt ggccgccggc ttgttattgc tcatcatggc acttaaanag atgcttaaca 60
aacctttcct acaatgttcc tcaaattttc agagcntnnn ngnngggagc atctggtncc 120

naaaaaaaaa attcttttna agccaanctn gaatgctttt ggaaagagct agcctcatac 180
cacttcantt gggaaggggg agtacctcgn cccctctaaa aactaatggg atcccccnng 240
gcctgccaan a 251

<210> 478
<211> 131
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 99
<223> n = A,T,C or G

<400> 478
tgatgtataa agacagcgag cggccctcag ggatctntga gcgattctcc gactccagtt 60
cacggaccac agtcaccttg accatcagtg gggcccacnt tgaggatgag gctgactatt 120
actgttactg t 131

<210> 479
<211> 110
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 15, 17, 20, 26, 27, 29, 32, 36, 49, 51, 55, 57, 62, 68,
69, 87, 89, 91, 96, 101
<223> n = A,T,C or G

<400> 479
agctgtttcc tgannencta aaactnnena angaangcat tttttaaana ncttngnttt 60
tnggcctnnt taaaaccaat ttaaacntnt ntgaantttt nggattttaa 110

<210> 480
<211> 690
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 55, 56, 58, 59, 70, 72, 84, 104, 117, 121, 123, 126, 128,
129, 131, 135, 136, 138, 139, 140, 141, 144, 148, 151, 153,
159, 160, 166, 169, 174, 175, 176, 177, 182, 183, 184, 197,
200, 205, 209, 211, 216, 217, 220, 221, 222, 225, 228
<223> n = A,T,C or G

<221> misc_feature
<222> 231, 233, 234, 235, 239, 241, 243, 244, 247, 250, 255, 259,
260, 268, 271, 272, 273, 277, 280, 284, 287, 290, 296, 300,
303, 310, 311, 313, 323, 328, 344, 345, 346, 366, 367, 383,
400, 404, 405, 407, 418, 420, 421, 427, 433, 435, 436
<223> n = A,T,C or G

<221> misc_feature
<222> 455, 462, 503, 516, 527, 539, 546, 549, 560, 580, 581, 588,
593, 594, 599, 600, 603, 608, 612, 620, 625, 626, 634, 637,
640, 641, 644, 646, 650, 651, 652, 653, 654, 658
<223> n = A,T,C or G

<400> 480
tggagctccc cgcggtggcg gccgaggtac tttttttttt tttttttttt ttaanncnnt 60
tttttttttn tntttttttt tttntttttt tttttttttt tttntttttt ttttgtnccc 120
nanccnanna ngacnntnnn nttnttttntt nanaaaaann aaaaanaang cccnnnnnta 180
tnnnaaaaaa aaaaaanatn ttttntttnc nctccnncan nnccnganga ngnnngggng 240
ntnncgngan aaaanaatnn gagggggntt nnncaanaan aaangtnccn cccctnttan 300
cantttgaan nangaaaggg gcnggatntt ggaagctgtg agannntccc cgaggaacct 360
cctgcnnttt cttctcctga agngcttatg aaggggcgan catnntnctc catacatncn 420
natttcntat agngnncccca aagggaccca ccttnctccc tngaaatttg gcttaaagca 480
acaaataaag tttttttttt ggnggggaag ggaaanggct ctttttnctt gctgtttcna 540
aaatgnggng aacccatttn atgtttctgg ggggaggaan ncccccncgg ggnnaattnn 600
aanaaaanaa ancccccccn ccggnnaaaa aaantanttn natnanatan nnnncccnaa 660
aagggggggg gggccccccc cccctttttt 690

<210> 481
<211> 518
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 75, 78, 81, 97, 112, 218, 505
<223> n = A,T,C or G

<400> 481
tggagctcca ccgtggtggc ggccgaggta caacgcagaa gcagggtcct gagttgggag 60
ccagtgggcc ctgancanta ncacgaggcc tgttgtntac caagtgcagt tnaaatacac 120
cgacagtaaa tggttcacgg ccgcccggca ggtcagtgcc ccccgtgaaa gacagaattg 180
tggttttcct ggtgtcacgc cctcccagtg tgcaaatnag ggctgctgtt tcgacgacac 240
cgttcgtggg gtcccctggt gcttctatcc taataccatc gacgtccctc cagaagagga 300
gtgtgaattt tagacacttc tgcagggatc tgcctgcatc ctgacgcggt gccgtcccca 360
gcacggtgat tagtcccaga gctcggcttg ccacctccac cggcacctca gacacgcttc 420
tgcagctgtg cctcggttac aacacagatt gactgctctg actttgacta ctcaaaattg 480
gcctaaaaat taaaagagat cgatnccaaa aaaaaaaa 518

<210> 482
<211> 601
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 5, 9, 11, 13, 15, 26, 84, 87, 90, 112, 117, 120, 123,
126, 130, 131, 135, 139, 140, 155, 161, 163, 168, 169, 172,
175, 184, 186, 187, 189, 191, 192, 197, 218, 226, 233, 258,
266, 277, 282, 283, 287, 288, 290, 292, 296, 303, 304
<223> n = A,T,C or G

<221> misc_feature
<222> 305, 307, 310, 311, 313, 315, 321, 322, 323, 349, 352, 355,
358, 359, 369, 383, 387, 399, 420, 439, 462, 463, 470, 506,
509, 514, 530, 547, 563, 572, 574, 583, 585, 590
<223> n = A,T,C or G

<400> 482
acgnncctnt ntntncaggc catggnaaaa aaaatccaat tatagaccgt cttgagagtg 60
tggtcttgct tcttatgtag tatnaanttn gagaactgat aattaatgca tngattnacn 120
ttnttnaacn nattnaatnn taattgtgaa aaaanaattc nangcacnna tngtnaaatt 180

gaanannana nnagganatt taagaccttg aggagctnga gccggncatt atnttaaatg 240
tgaggggttt atgacacngt accctncaat ggtgttnact anncttnngn anatgnacat 300
gcnnncnatn ntncncattg nnncttaagg cgtttggggt cacacagtnt tnaangtnnt 360
agaagaccng tcccctagga gtncccntga tttcatctna acatctttgc tgatgctcan 420
aggtactttt gccaagcant aaaagatcca ggtatatagc anntagttgn ggtgtcatgt 480
actgcaaaca tgcaaacagt tttttnaant tcanccttgg gcagaatctn ctttcaatag 540
aaaagtnctt ttggcgtttt tcnacttttt gngnaactcc aananagttn ttgttcccag 600
a 601

<210> 483
<211> 801
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 22, 26, 28, 29, 31, 39, 42, 46, 47, 49, 50, 51, 56, 57, 59, 60, 61, 66, 67, 76, 79, 81, 85, 86, 88, 90, 91, 94, 95, 96, 100, 101, 103, 104, 105, 106, 108, 109, 113, 114, 115, 120, 127, 128, 131, 134, 137, 141, 142, 145, 148, 151
<223> n = A,T,C or G

<221> misc_feature
<222> 152, 153, 156, 163, 166, 172, 205, 220, 227, 232, 237, 241, 243, 251, 254, 255, 256, 257, 260, 265, 270, 277, 281, 283, 321, 322, 332, 334, 373, 389, 406, 418, 433, 442, 455, 456, 464, 474, 490, 515, 518, 520, 523, 525, 526, 533, 552
<223> n = A,T,C or G

<221> misc_feature
<222> 554, 565, 582, 594, 615, 622, 624, 631, 645, 648, 650, 655, 668, 682, 685, 686, 690, 706, 707, 709, 713, 715, 728, 729, 734, 742, 744, 745, 746, 751, 755, 760, 761, 765, 766, 769, 772, 780, 790
<223> n = A,T,C or G

<400> 483
ccgggcaggt acnccattga gngctntnnt nccttagcna cnaggnngnn nctggnnann 60
ngaaanntca ctaaantgna nttannantn nagnnnaacn ngnnnntnnt gtnnntcatn 120
catgaanntt ncanctntta nnctnttntg nnnggnctgc ccnttnttct anacgtggat 180
ggtggaataa ccattgatct gagcnaacct ttattgtgan caactantga anaaggncaa 240
ncntgtctta ntannnngan ggaanagctn catctcnaca ncnaaacaaa ccatcaaggt 300
ttgccacttg ttgaaatttg nngccacaac tncngactac actgacttga caattaaacc 360
cactcccctt ttnaagggtt tccttccgnt aaaagattgg gaaganggcc atattatnca 420
acaaactcat tanatccccg tnacagtacg agtannctat atgnaaacta ccanttgggc 480
tttgattttn attcgtaacg cattgctttt ttttntgnan cantnntaca ctncattttt 540
taagaattca antntttaaa aattngtttg cttttcctta angaaattca tccnggccaa 600
ggaataaggg ggggngtttt antnggaatt ntaagggcca aaggnttncn ccccncaata 660
aaaattgntt gctacaaact tnacnncaan aaaaagagtt ttgggnncnt ttntncccca 720
aaaaaatnna aacntccaac cnannnattc ntaanctcgn ntttnnaang tnctaacaan 780
ttttagggan tttttttttt t 801

<210> 484
<211> 194
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 4, 5, 9, 14, 16, 17, 24, 25, 27, 31, 40, 45, 57, 60, 65,
70, 72, 75, 77, 88, 90, 96, 99, 100, 108, 109, 121, 125,
127, 128, 133, 139, 142, 145, 163
<223> n = A,T,C or G

<400> 484
aggnncccnt attngnnttt ttgnnanaca ntccatggan aaacnggtgg agctgcnccn 60
aggcnctgan cntgncnccc tctactgnan taactntann cacgactnnt acttactctg 120
ngctngnngt ganaagggna cntgnccggg cggccgacgt acnggtgctc tccaggctgg 180
cagcccgctg ccta 194

<210> 485
<211> 563
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 8, 11, 19, 21, 24, 25, 27, 33, 35, 36, 38, 39, 40, 45,
49, 50, 52, 61, 62, 64, 66, 68, 70, 101, 119, 123, 130,
136, 138, 171, 178, 209, 216, 225, 236, 239, 240, 243, 244,
249, 271, 274, 275, 279, 293, 299, 306, 319, 333, 347, 349
<223> n = A,T,C or G

<221> misc_feature
<222> 350, 360, 369, 379, 384, 387, 390, 394, 395, 399, 416, 422,
454, 458, 472, 478, 502, 504, 516, 518, 521, 523, 528
<223> n = A,T,C or G

<400> 485
acgngccngg nacagtggna ngannanggc ccncnntnnn atttncctnn cnggcctaag 60
nnantntntn acttgcagcc tcccaattat ctgggactac nggcgcatgc aaccatacnt 120
ggntaattcn tgtatntntt gtggagacag catgtggctg tctctacata nctcatgntg 180
tccgcccagg cacagtgatt aaactcccng gctcangtga tcctnctgcc tgggcntgnn 240
aanntgctng gattacaggc atatgccagc ntgnnctgnc tttcctgtat ttngtaatnt 300
aggaantggg agttcatgnt gggaggcaca ttncctatag gactccngnn caacctacgn 360
tgaaaatang tattcctana aaanggnttn tacnnactna tattacgggg caccantatt 420
gntatcaacc tgagaatgct ttttacatta tttngagnag aacctacgtg tnattcanat 480
agtaaaaact caaaccctaa ancngagtga gagcancnta ngnttcangt tttctaatat 540
ccttaagatt ttcctttgct tcc 563

<210> 486
<211> 353
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 21, 47, 49, 51, 56, 58, 62, 64, 65, 69, 71, 109, 111,
129, 145, 150, 165, 166, 182, 184, 186, 190, 201, 207, 213,
215, 216, 220, 221, 222, 229, 237, 246, 250, 251, 252, 254,
259, 260, 267, 270, 271, 274, 275, 282, 292, 309, 310
<223> n = A,T,C or G

<221> misc_feature
<222> 315, 316, 324, 331
<223> n = A,T,C or G

<400> 486

ccgggcaggt acttgnggaa ntcatgcctg gaaggggctt gggcacntna ntaagncngc 60
cntnntttng ntaaaaggag ggaaaaatct acttgaattg acttaccana ngcttgataa 120
cagagatgnc taggattaaa atccngatan tgacaaatcc acccnnaaat cccatcttct 180
antntnatgn ccccccgcct ncctgantcg ctntnnaacn nnatggatnc cccgggntct 240
aggaangggn nntnaagcnn atctatnccn nccnnctctg angggggggcc cngcacccag 300
cttttagtnn ccttnnatag gggnttaatg ngcgcgcttg gcgtaatcat ggt 353

<210> 487
<211> 207
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 34, 45, 46, 81, 96, 115, 116, 118, 170, 179, 180, 189
<223> n = A,T,C or G

<400> 487
gctccacccc cggtggcggc cacaggagca catntccctc ttctnnaggt gtgtccctca 60
gcatgacgct gactgatgtg ncataaagac tgactngtga cactggctag tgctnncnag 120
ccatctagac tacaacttat tctagataca ccctggagag atcttaaagn gcatatctnn 180
ttcacccana gaaggcattt atgcctt 207

<210> 488
<211> 821
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 61, 63, 68, 69, 76, 82, 88, 90, 92, 93, 94, 99, 106, 109, 112, 113, 114, 118, 123, 124, 130, 131, 132, 133, 134, 139, 140, 141, 142, 144, 159, 162, 173, 174, 180, 193, 194, 195, 199, 201, 202, 204, 206, 210, 213, 214, 215, 216, 217
<223> n = A,T,C or G

<221> misc_feature
<222> 222, 224, 229, 231, 233, 241, 246, 247, 249, 250, 251, 254, 255, 256, 260, 270, 274, 276, 277, 290, 292, 297, 298, 299, 307, 308, 309, 310, 311, 312, 315, 320, 324, 325, 330, 331, 339, 341, 349, 350, 360, 363, 364, 368, 369, 372, 380
<223> n = A,T,C or G

<221> misc_feature
<222> 387, 388, 389, 392, 393, 395, 396, 402, 413, 417, 419, 420, 421, 422, 423, 424, 425, 434, 439, 441, 442, 443, 451, 452, 454, 455, 457, 462, 464, 465, 466, 469, 470, 472, 482, 487, 493, 494, 501, 510, 512, 516, 522, 523, 540, 541, 543
<223> n = A,T,C or G

<221> misc_feature
<222> 544, 546, 551, 560, 564, 581, 602, 604, 605, 628, 630, 635, 636, 638, 644, 651, 652, 659, 662, 664, 666, 676, 684, 688, 691, 696, 697, 698, 703, 704, 708, 712, 713, 719, 739, 748, 749, 750, 756, 757, 760, 765, 778, 787, 796, 797, 800
<223> n = A,T,C or G

<221> misc_feature
<222> 801, 804, 810, 811, 813

<223> n = A,T,C or G

<400> 488
attggagctc cccgcggtgg cggccgcccg ggcaggtact tttttttttt tttttttttt 60
ngnaaaanng gggggnaaaa antccccnan tnnntttant tttttnaanc cnnncttnaa 120
aanncccccn nnnngggggnn nncngggggg gaaaaaaana cntgggggga aannaaaaan 180
ttgggcctta aannncaanc nnangntttn aannnnnccc cngnttttnc ngnaaaaaaa 240
nttttnntnn ntcnnnaaan aaaaaattgn tctntnnggg ggaaaaaaan gnccccnnng 300
gggggnnnn nnccnaattn tttnnggggn ntttttaang nggggggggnn gaacccaaan 360
ccnntttnna angggggggn tttttannnc cnnanngggg gnaaaaattt ttncccncnn 420
nnnnngggtt tttnccaang nnnaaaaaag nntnncnttt tngnnnaann cntaaatttc 480
cnggggnttt tanngggttt nggggccaan tnaaanggaa annaaaaatt ttttttggan 540
nanncntttt ncccccggcn gggngggttt cccccccccc naaaaatttc ccacattttt 600
tncnnaaaaa gggggggcct tttaaccntn caaannancc cccntgggtt nngggggtna 660
anantngggc cccccnaaaa gttntttnaa naaaannntt ttnnaaangg gnngggggnc 720
cccccctgtt tattaaatng ggaaaccnnn aaaacnnggn ggttnaaaaa aaagggancc 780
cccgggnggg aaattnntan naantttttn nanccccccc c 821

<210> 489
<211> 234
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2, 3, 5, 8, 13, 19, 24, 27, 33, 37, 40, 47, 49, 50, 51,
52, 57, 77, 78, 86, 87, 90, 93, 102, 105, 106, 117, 118,
119, 122, 129, 131, 135, 141, 146, 154, 162, 165, 167, 173,
178, 179, 181, 183, 184, 189, 195, 201, 210, 211, 216
<223> n = A,T,C or G

<221> misc_feature
<222> 218, 220, 223, 227, 229
<223> n = A,T,C or G

<400> 489
nnngngcngg tancttggnc ggtnttnacg ggnttcntgn tcatggngnn nnggatnacg 60
tgatactaga caaaaanncc attccnnccn agnatgtctt gngcnnggcg ggcgatnnnc 120
anggctttnc nacangtatt nctctncagc aganaaacca tnttngnggc agncttgnnc 180
ngnnccttna agcanccgct ntaaaactan nggatncncn ggnctgnang aata 234

<210> 490
<211> 229
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 9, 11, 12, 15, 18, 22, 25, 28, 31, 35, 36, 37, 40, 41,
43, 46, 48, 51, 54, 61, 69, 83, 89, 94, 97, 153, 165, 167,
168, 171, 189, 199
<223> n = A,T,C or G

<400> 490
aggtacanng nnacntantt cnttnttncc naacnnnaan ntngcngntg ntgntggtgt 60
natatgtgna cttactccgc tgncgaccnc tcanggntat atccaaatcg aggccattta 120
tcagcgactg agtcaggacg cttatctata tantttaacc ccctncnncc naaaccattg 180
acgccatgna tgggttatnc gcagtgaccg acaaccgaat tcgctctat 229

<210> 491
<211> 361
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 8, 12, 14, 15, 18, 20, 24, 32, 33, 34, 103, 110, 149, 152, 177, 196, 208, 213, 218, 221, 224, 229, 255, 256, 262, 265, 292, 312
<223> n = A,T,C or G

<400> 491
acntactngg tncnnctntn ttangagggt gnnnatggac accactccag gtcttgatgc 60
tctaggtatc tcaccttcca tccacacatg ttcacgtggg tcncgactan aattcactct 120
atagagacac acacagatgt aggccttgnt gntcttgaat gcttctcaat tactgantgg 180
cgggataaca tgagcntact ccgaggangg gcntggcntt ntgngctcna ccctaggtac 240
tgacaagatt ggatnncctc cnccnaacac ccaattggtt gtaaatgcgc tntagaacta 300
gtggatcccc tngggctgca tttaattcga tatcaagctt atctattacc aactaaccta 360
t 361

<210> 492
<211> 461
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 124, 125, 139, 163, 166, 168, 171, 207, 216, 237, 251, 254, 288, 305, 314, 317, 328, 355, 356, 374, 402, 404, 414, 418, 436, 439
<223> n = A,T,C or G

<400> 492
acgcccgggc aggtactttt tttttttttt tttttttttt ccctatcgat ctctttaaat 60
ttttaggcca attttgagta gtcaaagtca gagcagtcaa tctgtgttgt gagccgaggc 120
acanntgcaa aagcgtgtnt gaggtgtccg gtggaggtgg canccnanct ntgggactaa 180
tcaccgtgct ggggacggca ccgtgtnagg atgcangcag atccctgcaa aagtgtntaa 240
aattcacact nctnttctgg agggacgtcg atggtattag gatagaanca ccaggggacc 300
ccacnaacgg ggtngtngaa acagcacncc ttattttgcc cacttgggag gggcnntgac 360
accaagaaaa ccanattttt tgttttttca cggggggccc antntacacg tttntgtntt 420
gggccttggg ccgctntana actaagggga tcccccgggc t 461

<210> 493
<211> 607
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 53, 230, 330, 443, 450, 454, 494, 504, 516, 519, 552, 564, 571, 582, 584, 595, 597
<223> n = A,T,C or G

<400> 493
gttctgagcc tcagctgacc atantgctca tgccaagtcc tgagcagggc atnttgaatg 60
gtggttccct catgactaca tacaccgtta gggaatgttt cgttaagagg aaatcaagat 120
gttctaacct gtgaaggtag aatagattcc aggctacaca aacacatgaa gtgtgcctta 180
tattgattac taaagaggtt gctgccaaga ctgcttccaa agggcagaan atagccctaa 240

aaaatgtttg cagtgtggaa atgcattttt aataagtcat attctagtaa caagttgcat 300
ttggtaagac acaaagaaac aatgttggtn tgcagagtag aaatctctgg aagatgatat 360
tgtcatatca gagatattgt cagtatcagg agataccttg aaatctctgg aaagatgatt 420
tttttgtctc acatatggca ttncacaaan taanaaatgcc caaaaacttg caaaaattca 480
cccccgtacc tccnggcccg cttnttagaa acctanttng ggatcccccc ggggcctgcc 540
agggaaattt cnattattca aagnctttat nggataccccc gntnctaccc ttccnanggg 600
ggggggc 607

<210> 494
<211> 735
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 229, 230, 269, 278, 322, 330, 345, 355, 365, 366, 381, 385, 392, 416, 418, 442, 454, 478, 483, 487, 499, 506, 509, 510, 515, 549, 552, 565, 566, 567, 580, 591, 597, 602, 620, 622, 624, 633, 639, 642, 659, 672, 693, 698, 700, 714, 731
<223> n = A,T,C or G

<400> 494
cgcccgggca ggtgcgagaa tgaagactat tctcagcaat cagactgtcg acattccaga 60
aaatgtcgac attactctga agggacgcac agttatcgtg aagggcccca gaggaaccct 120
gcggagggac ttcaatcaca tcaatgtaag aactcagcct tcttggaaag aaaaaaaaaa 180
gaggctccgg gttgacaaat ggtggggtaa cagaaaggaa ctggctacnn gttcggacta 240
tttgtagtca tgtacctcgg cccgaggtnc ttttgctntc tgcctttgcc aatatttact 300
ttggatcttt tgttttttgc cntttatttn gttttttgcc tctgntttaa aacangccta 360
atttnngaaa gggcaataag ngaangcttg cnagtaatac attgctgaaa aatgcnantt 420
caccagaaaa atcaagcaat tngattttct ttangaatga agtgcctaga agttggtnct 480
gtnggcnatt cagagggtna aaaatngann taacnaatgg ggccagggac ttcctgcctt 540
ggatggacnt anattccaaa caccnnnttt tgaaacactn ggattttcaa naccacnacc 600
anatggatga taaaatggan tngntttacc acnccttant ancaccacca acaacctana 660
ttgtgggtta gnccaaatgg aaaaagagaa acntggtnan tacttccttt gggntgctaa 720
attgggaaaa naaaa 735

<210> 495
<211> 658
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 550, 561, 586, 606, 633, 634, 640, 643, 649
<223> n = A,T,C or G

<400> 495
aggtacaaca ggcttcagat gttactatag ataatcacaa ggaacactgc gcttggggca 60
tgactgccct cagcaaccct tctggcggca gacacagttg ttagttttcc aacatcctgc 120
tttcatgaga acagttttct gtttgctcat atagccttca gtggtatact gagttggtca 180
cgaccttcat tctttcggcc tgtaacatct ccccattttt gtttttgcat taattgaata 240
aaggtaattg caggttgtgc agctctcaat tgccgtttgg tggtccagct gattttgcag 300
acttatatca gctgtcagca gactcgtcgc agggtttctc attctcgttc ttcttgtcag 360
tgtcagtttc tctgctccag cagaccttca ctcacgtccc tgtcctaggt gccagttgtc 420
gctgttggtt gttatgggag tgaacgaagg gggatgaatg cagaacgaag acaaagacaa 480
aaagtatttt tggaagaaag gggtcagggg gctccttcta gtgaacaagg ggccccccgc 540
gtacccttgn ccggcgggcc nttctagaac taggggggatc cccccngggc ctggcaggga 600
atttcnaata ttaaaagctt tatttgatac ccnntccgan ccnttgaang gggggggg 658

<210> 496
<211> 150
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 56, 68, 87, 88, 109, 113, 114, 122
<223> n = A,T,C or G

<400> 496
ccgcggtggc ggccgcccgg gcaggtacgc ggggaggtgg tggcgaancg ctcctncgaa 60
aggtttcnga agctggtggt agctagnnaa gataacgctg cgttagggna tanngctttt 120
tnatgatgga actccgattg aaagcaagtt 150

<210> 497
<211> 267
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 110, 111, 113, 131, 134, 136, 145, 146, 147, 148, 149, 161,
193, 196, 198, 211, 213, 214, 218, 219, 222, 229, 233, 238,
244, 247
<223> n = A,T,C or G

<400> 497
gggcgaattg gagctccccg cggtggcggt cgcagaagag aatcccgttg gtcttgctgt 60
gctggatgaa gaaaaggaag gggtggtcgg cgcagaagcg ggggacgaan nanggcacac 120
cgcatcacca naanancagt ttttnnnnnt gcagcctccg ngccttcctc attgacctcc 180
acaaaagact tgngcnanaa acctttggaa nannaaanna gntcttgcnt ggnaccantt 240
ccantanaat ttcttgccct ttgccca 267

<210> 498
<211> 25
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 498
nttcctccca cccttagggg gaaaa 25

<210> 499
<211> 189
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 42, 67, 101, 106, 119, 127, 160
<223> n = A,T,C or G

<400> 499
accgcggtgg cggccgaggt acctgtcttg gcctcctaca gnccttttta cttattttgt 60

tttttanaat agagacaggg tcttactatg ttgctcagac nggttncaaa ctcctaggnt 120
caagcantct tccagcctca gcctctaaag tgctgggatn acaggcatga gccaccacac 180
ccggccaag 189

<210> 500
<211> 35
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 21
<223> n = A,T,C or G

<400> 500
accgcggtgg cggccgaggt nctttttttt ttttt 35

<210> 501
<211> 83
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 61, 80
<223> n = A,T,C or G

<400> 501
ccgggcaggt gtgcgtgtgt ggagtaaaat gcatcggaca gtgattgact ccacttttga 60
ntgagatgtg gaggcggtan tgg 83

<210> 502
<211> 86
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 32, 34
<223> n = A,T,C or G

<400> 502
aggtacacac agttnaccac aaaacaggcc tntntgaaaa agccattgcc atggactgcc 60
atacagacaa tgacaagaca caaata 86

<210> 503
<211> 123
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 4, 11, 12, 14, 16, 17, 18, 19, 35, 38, 45, 56, 59, 60,
64, 67, 76, 82, 84, 87, 91, 93, 100, 101, 104, 107, 109
<223> n = A,T,C or G

<400> 503
acnngccagg nncntnnnng cctattacac ctacntgnct ctggnctttt atttgnacnn 60
cgangangtg gatctngaag gngngancca ntncttgcgn naantgncnc atgagaatct 120

cga 123

<210> 504
<211> 291
<212> DNA
<213> Homo sapiens

<400> 504
ctccccgcgg tggcggcccg cccgggcagg taccaccatg cctggctaat ttttatattt 60
ttagtagaga cggggttttg ccatgttggc cgactgatat cgacctcctg acctcaggtg 120
atctgcccgc ctcggcctcc caaagtgctg ggattacagg cgtgagccac tgcgcctggc 180
caagattaga ggttttatac tttgtatcat ccaactttga aattcttgct tgctggcacc 240
ttggcaaacc tactgcctga cacatgtgag tgggtttcta aaaatttttg t 291

<210> 505
<211> 235
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 16, 201, 202, 207, 208, 227
<223> n = A,T,C or G

<400> 505
atagggcgaa ttggnnctcc ccgcggtggc ggccgcccgg gcaggtacta gctactctgg 60
aggctgaggc aggagaatgg cgtgaacccg ggaggcagag gttgcagtga gctgagatca 120
caccactgca ctccagcctg ggcgacagag agaggctccc tctcaaaaaa cgaaacaatg 180
ttcttggctg ggcgccaaca nntttannac ctgttaattc ccaagcnggt accct 235

<210> 506
<211> 22
<212> DNA
<213> Homo sapiens

<400> 506
ctccccgcgg tggcggccgc cc 22

<210> 507
<211> 420
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 8, 10, 11, 36, 42, 46, 52, 116, 119, 120, 121, 123, 154,
186, 211, 224, 226, 228, 232, 235, 244, 269, 318, 326, 333,
344, 345, 366, 368, 374, 390, 405, 418
<223> n = A,T,C or G

<400> 507
aggnactntn nttttttttt tttttttttt cctganatgc gngtgnccta tnaactttcg 60
atggtagtct ccgtgcctac catggtgacc acgggtgacg gtggaatcag aggttntann 120
ncngagaggg agcctgagaa acggctacca catncaagga aggcagcagg cgcgcaaatt 180
acccantccc gacccgggga ggtagtgacc naaaaaaaaa aaangnangg anaanacaag 240
ggtncctcgg cccgctctag aaactaagnt gggatccccc gggctgcaag ggaaattttc 300
gaatattcaa aggctttntt cggatnaccc ggntcggacc cttnnagggg gggggggcc 360
ccgggntncc cccnaggcct ttttttgggn ttccccttttt ttagnttgga gggggggntt 420

<210> 508
<211> 696
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 53, 124, 286, 323, 349, 351, 388, 415, 423, 431, 434,
444, 455, 489, 492, 493, 500, 502, 511, 514, 515, 516, 518,
525, 538, 550, 553, 558, 559, 560, 563, 565, 567, 573, 577,
580, 585, 589, 599, 600, 601, 602, 618, 620, 626, 633
<223> n = A,T,C or G

<221> misc_feature
<222> 636, 640, 641, 643, 644, 650, 657, 658, 659, 662, 665, 667,
669, 676, 692, 696
<223> n = A,T,C or G

<400> 508
gctccagccc cganccctgg acatctactc tgccgtggat gatgcctccc acnagaagga 60
gctgatcgaa gcgctgcaag aagtcttgaa gaagctcaag agtaaacgtg ctcccatcta 120
tganaagaag tatggccaag tccccatgtg tgacgccggt gagcagtgtg cagtgaggaa 180
aggggcaagg atcgggaagc tgtgtgactg tccccgagga acctcctgca attccttcct 240
cctgaagtgc ttatgaaggg gcgtccattc tcctccatac atcccnatcc ctctactttc 300
cccagaggac cacaccttcc ttncctggga gttttgggct taagccaana nataaaagtt 360
ttttattttt cctcttgaag gggaaaangg gcttcttttt tcctgggttg ttttncaaaa 420
aanttaaaag naanccccctt tttnggattg ttttncttgg ggggaaaaaa aaaaaaaaag 480
ccctttttgnt anngggggggn tnaaaaaacc ngtnnntnga aaaangtttt ttttttttntt 540
tttttttttn ggnttggnnn aanancnttt ttntttnaan ctttnccgng gggggggggnn 600
nnttttttta aaaaaaanan ggggcncccc ccnccngggn ngnnggggan gaaaatnnnt 660
anttntngng tttttnttcc cccccccccc cncccn 696

<210> 509
<211> 638
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 21, 170, 185, 189, 247, 291, 293, 304, 313, 315, 323,
324, 327, 336, 344, 349, 350, 365, 369, 376, 379, 386, 390,
391, 392, 394, 401, 405, 406, 407, 409, 410, 411, 415, 437,
439, 440, 441, 442, 443, 466, 478, 483, 484, 497, 509
<223> n = A,T,C or G

<221> misc_feature
<222> 510, 511, 519, 528, 553, 554, 557, 560, 566, 582, 584, 589,
591, 595, 598, 599, 610, 622, 626, 627, 630
<223> n = A,T,C or G

<400> 509
taaaacttta ttaanagaat nttatcagtc aaatttccag attaagaata acgttcttgg 60
tttcagtctt catttgtctt gcttgaaacc tatggttgcg catcacctgc ttccagcact 120
ttagtgagat caaaagtggg cataataccc tccctgacat caggaccatn tccaggctca 180
tcctntatnt taagcagagc cagttcctgt tgaaaagctt ccatgtcagg cccttgaaaa 240
gcaggcnctg cttgattttc aatctcccca ctaggggcaa tacccggatt ntnagtgggg 300
ggtnccttttt ttngncgttt ttnnctnagg ggggcncggg gcanttccnn atcccccccg 360
ggggngggna aaaacnttng gggaantttn nntntttttt naagnnngnn ngggnaaatt 420

tttttttaa aaaaagncnn nnntttttt tttccccccc cggggntttt tttttttngg 480
ggnngggga aaaaaanaaa aaaaaaggnn ngggggggna aaaaaaanaa aaaaactttt 540
ttttttttt ttnnaanacn ttttgngggg gagccccccc cntnttatnt ncttnggnng 600
ggggggggn ttttaaaaaa anaaannaan cccccccc 638

<210> 510
<211> 566
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 388, 440, 483, 489, 497, 509, 539, 550
<223> n = A,T,C or G

<400> 510
atatagggcg aattggactc caccgcggtg gcggccgagg tacgcgggga cggagggcgg 60
tgcccgcgtc agtgaccgaa ggaagagacc aagatgaata cagagcccga gaggaagttt 120
ggcgtggtgg tggttggtgt tggccgagcc ggctccgtgc ggatgaggga cttgcggaat 180
ccacacccctt cctcagcgtt cctgaacctg attggcttcg tgtcgagaag ggagctcggg 240
agcattgatg gagtccagca agatttcttt ggaggatgct ctttccagcc aagaggtggg 300
aggttcgcct atatctgcag tggaagagct tccagccatg agggactaac atcaggcaag 360
ttcctttaat gcctggcaaa gcacgttnct tgttgggaat accccatgac acttgtcatt 420
tgggccggcc cgcttctagn aactagttgg gatccccccg gggcttgcag ggaatttcga 480
atntcaaanc tttatcngaa ttaccccgnt ctgaaccttc gaagggggg ggcccccgng 540
taccccccaan cctttttgg tttccc 566

<210> 511
<211> 624
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 436, 447, 467, 472, 480, 500, 523, 552, 561, 573, 602, 605,
610
<223> n = A,T,C or G

<400> 511
aggacatagc cccagaaggg cggactggcc ggagtccagg gatggcagcc aacgccccat 60
aacagagatc agcattggac tacaagaaga ggcaaggaga aatcaaggat caaaatttaa 120
gtaaaagaaa agtcaagtca ttaaaaatag ccccctcatt gaagagtggg aacgtaggtg 180
tgatgttctg gcataaggag tgaaaaaaga aaaagctcta ttacttgaag cttttcacca 240
ggggcagaga gaatggccgg aagtgagaaa cgtgtgtgtg gatgcttaca ccgatgccgt 300
ctcctaatat tggaacatgg cttccagaaa ggagaaccaa ttattcctaa ttccacgggc 360
ggcatcctct gactcccaaa ctcccaaagt ggagggcaag agctgccctt accttgagga 420
agcttcagag tgtttntggt aaaactnttt ccgggggtgc gacatangga tnctttttcan 480
agctcccttg gacaatggtn cccttgcccc ggggcgggcc cgnttctaag aaactagtgg 540
gattcccccc cnggcttgga nggaatttcc atnttccaag ctttttttcga atacccgtcc 600
cnaancctcn gaagggggg gggc 624

<210> 512
<211> 238
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 119, 126, 128, 138, 141, 155, 160, 186, 190, 204, 218, 219,

221, 231
<223> n = A,T,C or G

<400> 512
gaattggagc tccccgcggt ggcggccgag gtactttttt tttttttttt tttttttttt 60
ggtttttttt tttttttttt tttttttttt ttcctttggg caacacttta ttgggaaana 120
tttacncncg gggacctntc ntaggccaag cgatnaaaan agggccccag gagccctggg 180
gtcccnaggn ggctcaaatg gaanccatgg gacggccnnt ntaaaactag nggatccc 238

<210> 513
<211> 616
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 227, 303, 456, 505, 506, 510, 511, 515, 526, 550, 554, 583
<223> n = A,T,C or G

<400> 513
aggtacgcgg gagggttctg gtgtttggtt tcttcattct ttactgcact cagatttaag 60
ccttacaaag ggaaagcctc tggccgtcac gcgtaggacg catgaaggtc actcgtggtg 120
aggctgacat gctcacacat tacaacagta gagagggaaa atcctaagac agaggaactc 180
cagagatgag tgtctggagc gcttcagttc agctttaaag gccaggnacg ggccacacgt 240
ggcttggcgg cctcgttcca agtggcggca cgtccttggg ccgtctctaa atgtctgcag 300
ctnaagggct tggcactttt tttaaatata aaaaatgggg tgtgtatttt ttaatttttt 360
tttgttaaag ttgatatttt ggggtcttct gttggacaat tcggggggtg gatcctgttc 420
tgcgctgtgt acctgcccgg gggcgggccc gccttntagg aaacttaggt gggatccccc 480
ccgggggctt gccaggggaa atttnngatn ntcanaggct ttattncgaa tacccgttcc 540
gaacccttcn gaangggggg gggggccccg gggtaccccc aancttttt ggtttccccc 600
ttttaaagtg gagggg 616

<210> 514
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 41, 56, 62, 65, 67, 68, 71, 74, 80, 214, 219, 293, 315,
404, 429, 449, 477, 532, 552
<223> n = A,T,C or G

<400> 514
ccgggcaggt acttggaaaa cttgttgaag atgatggggn ngggaagggc caccanaaaa 60
anaananntt nttnttcttn tgctggcgat gagctttccc gccaaggtga ccgggtgggt 120
gtctccatag cccacagttg tcatgctgat ggtggcccac caccagcaga tggggatgct 180
ggtgaggctg gatgtgtggt catctttctc cacngagtng ataagcacag agaaaatgga 240
aatgcccaca gagagggaag agaagccagg aagcccaact ttcatggtta gcntgtgtct 300
ccagtgtggc caccntagaa gacccggaaa gtcctacccg agtgcccggg ccaagccttt 360
tagaattccg ggaaaatcct cattaaagcc cgttagggat ctgngaccca cccttgcccc 420
atgttctcna atatccctca ctctctttnc tccttgggtg gtcttacagc cccaacngtt 480
ggcataggaa aggggaaata attagaagac aaaagttcaa atggatggtt cnaacagggt 540
tttttttccc angaaatttt ctttttggac aaagggaagc cgggccaagc ccaaggcccc 600
gggaccgggc aaagcctccc 620

<210> 515
<211> 750
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 273, 479, 570, 571, 577, 582, 602, 635, 636, 653, 665, 669,
673, 677, 688, 694, 723
<223> n = A,T,C or G

<400> 515
acgcggggat acaagaaaga ggaagagaag caggaagatt ctacatacag gctggctgtg 60
tttcccctgg ggcatgctcc tgtttactgg tcccatgcca ggttgactca ttgcctcgtt 120
catgggtgga attaaaatgc ctacctgggg aataaataga gcaaggctgg gtgctcacct 180
ccacagcggc ttccttgatc cttgccaccc gcgactgaac accgacagca gcagcctcac 240
catgaagttg ctgatggtcc tcatgctggc ggncctctcc cagcactgct acgcaggctc 300
tggctgcccc ttattggaga atgtgatttc caagacaatc aatccacaag tgtctaagac 360
tgaatacaaa gaacttcttc aagagttcat agacgacaat gccactacaa atgccataga 420
tgaattgaag gaatgttttc ttaaccaaac gggatgaaac tctgagcaat gtttgaggng 480
tttatgcaat taaatatatg acaagcagtc tttgggattt tattttaact tttctgcaag 540
acctttttggc ttcacagaaa ctggcagggn nttgggngga gnaaaccaac taccggattt 600
gnttgcaaaa cccacaccct ttctcttttc tttanngcc tttttgacct acnaaaactt 660
acaangaana aanttgntgg aaaacctngc tttncatggt tttattttaa attaaaattg 720
gangggcaaa aaaaaaaaaa aaaaaaaaaa 750

<210> 516
<211> 422
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24
<223> n = A,T,C or G

<400> 516
ccgagggtac ttttctgaga cttnatcctc gaggcctggt gggctaccgg ctcttttcat 60
cttcacggcc acccacagaa atgaagcaga gtggcctagg ctcacagtgc acagggctgt 120
tcagcaccac agtgctgggt ggctcctcca gtgccccgaa tcttcaggac tacgcccgca 180
gccatggcaa aaagctacca cctgccagtc tgaagcaccg agatgggttt gaagggtgtt 240
ccatggtgcc taccatctac cctctggaaa cactgcataa tgccctttcc ctacgtcaag 300
tgagtgaatt cttgagtaga gtctgccagc gccacactga tgcccaggca caggcatctg 360
cagccctctt tgattccatg cacagcagcc aggcctcaga taacccattt tctccaccac 420
gt 422

<210> 517
<211> 322
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 39, 45, 165, 172, 175, 208, 322
<223> n = A,T,C or G

<400> 517
aggtactttt tttttttttt tttttttttt tttggttgng taatncttta tttgaaaaaa 60
tgaaaagtgc acacacacac acacacatac acacacacac acacacactt acataggcac 120
aggataatct ggaagtatga ccagcaaatg ataactgatt ccctnagggg anaanaaact 180
gggtggctga aggacaggaa tgagaaanaa ggacagttgc gcttgtttgt atcgtttgaa 240
attgtccagt gtgtatgtgt tcttttcaaa tgtttgaaga accattggct cccttatcaa 300

aatgtaaata ccaaggaaaa tn 322

<210> 518
<211> 746
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 5, 327, 541, 563, 568, 590, 597, 605, 618, 620, 626, 631, 643, 650, 658, 676, 680, 683, 684, 686, 694, 707, 716, 718, 720, 728, 741
<223> n = A,T,C or G

<400> 518
gnggnggcgg ccgcccgggc aggtacgcgg ggggcggcgg cggagagagc tggctcaggg 60
cgtccgctag gctcggacga cctgctgagc ctcccaaacc gcttccataa ggctttgcct 120
ttccaacttc agctacagtg ttagctaagt ttggaaagaa ggaaaaaaga aaatccctgg 180
gccccttttc ttttgttctt tgccaaagtc gtcgttgtag tctttttgcc caaggctgtt 240
gtgtttttag aggtcctatc tccagttcct tgcactcctg ttaacaagca cctcagcgag 300
agcagcagca gcgatagcag cccgcanaag agccagcggg gtcgcgtagt gtcatgacca 360
gggcgggaga tcacaaccgc cagagaggat gctgtggatc cttggccgac tacctgacct 420
ctgcaaaatt ccttctctac cttggtcatt ctctctctac ttggggagat cggatgtggc 480
actttgcggt gtctgtgttt ctggtagagc ttctatggaa acagccttct tttgacagca 540
ntctaccggg ctggtggtgg cangggtntg ttttggtcct gggagccatn atcgggngac 600
tgggngggac aagaatgntn taattnaggg nggccccacc ctngggtggn gggtaccncg 660
ggccccatat aaaaanaaan ggnnancccc ccgngggggg gggaaanttt aaatcnangn 720
ctttcccncc cccccccccc nggggg 746

<210> 519
<211> 607
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 128, 211, 308, 388, 417, 459, 462, 491, 521, 534, 538, 541, 557, 558, 567, 576, 577, 579, 586, 591
<223> n = A,T,C or G

<400> 519
ccgggcaggt acgcgggagg catgcaccac cacgctcgac taatttttgt atttttagta 60
gagacggggt atcactatat tggtcaggct ggtcttgaac tcctgacctc aggcgatcta 120
cccgcctnga cctcccaaag tgctgggact acaggtgccc accaccacgc ttggcttatt 180
ttttttgtat ttttaggaga gacggggttt naccgcatta gcgaagatgg tctcgatctc 240
ctgacctcgt gatccacccg cctcggcctc ccaaagttct gggattacag gcttgagcca 300
ctgcgccngg cctagaaccc tgcttctcat ataagatggg cctgcaccta cctctggcat 360
gtttttcttt gtgtatttcc cgtttttnat cctgtaacta aatgctcatt atttaanaac 420
actccagtta cttttccctt taggcctggc aaaactttnc tntttctttt tttttttttt 480
ttataaactg naacctttgg ggcgggtttt agaaaactaa ntgggatccc cccngggnct 540
ngaaggggaa atttggnntt ttcaaanctt taattnnant acccgnccca ncccccaagg 600
ggggggg 607

<210> 520
<211> 641
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 3, 38, 258, 314, 412, 635, 639
<223> n = A,T,C or G

<400> 520
tgnacctcca ccgcggtggc ggccgtttga gaagccancg ctcacccacc cggggtctct 60
gtgcattgac ctttgggtgc tgacttggag aaaagcacaa acacgaccag tcccatcctg 120
gctcccgtgg ggcttcttct atctacgcat tgtatcgact gcattagttg gactaagatg 180
atgactcagt taaaggagga gacaaatgct gactgtctaa gcaagaatgg cccaagctgg 240
caagaaaaag cacactgnga tacataggga tacaggaagg gcaggagcct ttttgcctgc 300
cgggatctaa caancattta cattttgttt tgcctgccaa acctatcaag aagggatttc 360
ttgtttgggc ccagggggag tctccacttg gaaacaaaac aaaaaatggc angtcaaaaa 420
agttctttga ggtgtcccta ttccaagcca gcccaagaag tcctcaatcc cgtcatccca 480
cggggaagaa gttccttttg aaggggaaag catgaaaagt tccagcctca tggcctcttg 540
ccttattggg tcaattttct tcggggaatc acttgtgaat caatgaatat ctttcattta 600
cctctgccgg gacccacccc atggtttcaa ggggnggcnt t 641

<210> 521
<211> 304
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 28, 68, 69, 76, 94, 113, 116, 201, 232, 244, 278, 285
<223> n = A,T,C or G

<400> 521
tgtactaanc cattgtgaca gaaacttnct ttaccattga tgagctggaa gaactttatg 60
ctcttttnna aggcantaac atctcaccag ctgntactgg ggcgggagca gcnacncgct 120
ggaccggcat gaccccagcc tgccctacct ggaacagtat cgcattgact tcgagcagtt 180
caagggaatg tttgctcttc ntctttcctt ggcgcatgta ggaactcact cntgaccgtt 240
tcanggcctt ccgctttgtt ccagttttat ttaggatnaa aaatnggagg acctcttttg 300
gatt 304

<210> 522
<211> 362
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 21, 25, 97, 101, 104, 112, 135, 137, 147, 148, 149, 153, 154, 157, 162, 164, 167, 171, 173, 182, 189, 203, 204, 212, 232, 245, 247, 279, 292, 297, 301, 309, 311, 321, 341, 346, 351, 352, 355
<223> n = A,T,C or G

<400> 522
aggtacccgg gatttnacca ntgtnactgt gctaaatggt tctgtcttcc tcagtgtgat 60
ggagaaagcc cagaaaatga atgatactat atttggnttc ncantggagg ancgctcatg 120
ggggccctat atcancngta ttcaggnnnt atnngcnaac antnatnacc nancctactg 180
gnaacttang agtggattgc ctnnccctgg tncacgcact ggtagtctac gntgtccgca 240
atggntnaaa acttggaagt ctcttgagcc caggaggcna taaagtccca anacttncct 300
natctgccna nttatacctt natgcctggg gcaacacaac nagacntgcc nnctnaaaaa 360
aa 362

<210> 523
<211> 287

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 267
<223> n = A,T,C or G

<400> 523
ccgggcaggt acaacactct gtccctacaa gggcacaggt gccaccttga gcagctgtga 60
ctatgtctaa ggccatccgg ttttgcatca ccaccttcct gatctgatca aactcatcaa 120
ttaacaaaag gagggcagct caggtgtaat tcatgggccc aatctctgtg ttctgcaagg 180
gctgtaacct gcatttctac agtgatgaca cctgttccag ggacagttat tgctaagggg 240
tagaaccact aggggctcaa tgcactnaca aaaactggga acacagc 287

<210> 524
<211> 369
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 25, 34, 69, 218
<223> n = A,T,C or G

<400> 524
ggggcaggct tgccatgggt tttgngacac cccnatccaa agctcaccat gttgcatccc 60
gcccattgnc tgtgggaccc caagtttcta gccatgtcca gttcttcaca aaagctggat 120
gcacatgcca aggcaagcca tccacagctg ctgctggaag ggtggtgcag atctaacagt 180
tggagacatt ggccacctca gcataggtgt gagcccantc cacaatgttg ttggagcatg 240
ccaacctgtg gctgagcaaa taactcccaa gaatttggca gacaatttc ggcccttgga 300
ccttggattt attgatggcc caactgcaca ctgccaaatg ctgtcacaag aggggcacca 360
ccacttcta 369

<210> 525
<211> 570
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 420, 452, 496, 516, 522
<223> n = A,T,C or G

<400> 525
aggtacgcgg ggaagcgcaa aagaagaaag atgaggcaga ggtccaagta aaccgctagc 60
ttgttgcacc gtggaggcca caggagcaga aacatggaat gccagacgct ggggatgctg 120
gtacccgtgc ccaggaggac gccgagctcc agccccgagc cctggacatc tactctgccg 180
tggatgatgc ctcccacgag aaggagctga tcgaagcgct gcaagaagtc ttgaagaagc 240
tcaagagtaa acgtgttccc atctatgaga agaagtatgg ccaagtcccc atgtgtgacg 300
ccggtgagca gtgtgcagtg aggaaagggg caaggatcgg gaagctgtgt gactgtcccc 360
gaggaacctc ctgcaattcc ttcctcctga agtgcttatg aaggggcgtc cattctcctn 420
catacatccc catcccttta ctttcccaag angaccacac ccttcctccc tggagttttg 480
gcttaagcaa caaganaaaa gtttttattt tttctnttga angggaaagg gcttcttttt 540
tccttgcttg ttttcaaaaa tttaaaaagg 570

<210> 526
<211> 785
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 59, 61, 62, 65, 66, 68, 69, 80, 81, 83, 101, 274, 303, 353,
366, 386, 440, 448, 450, 454, 470, 494, 495, 496, 498, 510,
514, 517, 523, 537, 557, 558, 561, 598, 606, 613, 615, 618,
624, 625, 636, 637, 643, 645, 648, 654, 665, 668, 673
<223> n = A,T,C or G

<221> misc_feature
<222> 676, 681, 696, 702, 722, 732, 740, 745, 747, 748, 751, 757,
769, 781
<223> n = A,T,C or G

<400> 526
agctccaccg cggtggcggc cgagctgacg caaacatgca gatctttgtg aagaccctng 60
nnggnngnna ccatcacccn nanaagaaaa tccttttgac nccattgaga atgtcaaagc 120
caaaattcaa gacaaggagg gtatcccacc tgaccagcag cgtctgatat ttgccggcaa 180
acagctggag gatggccgca ctctctcaga ctacaacatc cagaaagagt ccaccctgca 240
cctggtgttg cgcctgcgag gttggcatta ttgnagcctt cttccccgc cagcttgccc 300
agnaaataca aactgcgaac aagtatgatt ctgccgcaaa gtggctattg ctncgccttc 360
accctngtgc ctgttcaact gcccgnaagg aaagcaaagt tgttggttca cacccaaaca 420
aacccttgcg gtcccaaggn aagtaaangn tcanaattaa agggttggcn tcttttcctt 480
ttgaaagggg acannncnct tcctggcccn cagngcnccc cgntgggccc cctgggnaac 540
ccttccaaat taaaaanngg nttcccttt ttcaattttg gaccttggga agccaagnct 600
ttctanatag aananatngt atcnntcaca tattannata cgngnttncc cttngggccc 660
cgatnttntt aanaanacct naagtgggga ttcccncccg gngccttgcg aagggaattt 720
cngaaatatt tnaaaagccn ttaantnnga nttcccnggt ccgaacccnt cccgaggggg 780
ngggg 785

<210> 527
<211> 644
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 118, 293, 296, 305, 321, 331, 334, 339, 341, 343, 350, 353,
359, 365, 370, 371, 375, 377, 391, 397, 402, 409, 423, 425,
427, 433, 448, 456, 476, 480, 481, 487, 496, 507, 512, 513,
516, 518, 521, 524, 527, 534, 539, 552, 554, 561, 587
<223> n = A,T,C or G

<221> misc_feature
<222> 593, 595, 597, 598, 601, 606, 607, 608, 610, 612, 614, 620,
623
<223> n = A,T,C or G

<400> 527
agatacgcgg gggaggagtg agctcttggg gtgtccagtt ggttgccgcg gcaagtctct 60
ccgagcagcg catttgtctt ctaggctgct tggttcgtgc ctccgagaaa ggggtctnct 120
gctgccagct aagtgtggga gaacttgtgc acgtatctcc cctccgaatc ccaacgatgg 180
gtaacgccag ctttggctcc aaggaacaga agctgctgaa gcggatgcgg cttctgcccg 240
ccctgcttat cctccgcgcc ttcaagcccc acaggaagat cagagattac cgngtngtgg 300
tagtnggcac cgctggttgt nggtgaaaaa ntanctgcnc ntnggccggn cgnttctana 360
actantggan ncccngngct gcatgaattc natatcnaag cnttatttna ttcccgtcga 420
ccntntntag ggngggggga cccggatncc cccaanaatt tttgtttccc cttttnattn 480
naggggnttt aatatncacc tcctatnggg cnnctnantc nttngtncaa tttncttgnt 540

cctcctcgtt gntnaaaaat nttggatatt attgtttccc ccccctntat ganancnnac 600
naaaannnan tnantttaan tantttttt ttttttttt cccc 644

<210> 528
<211> 515
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 346, 386, 436, 437, 450, 451, 454, 470, 486, 489, 490
<223> n = A,T,C or G

<400> 528
aggtacgtcc aaatgacgaa gtcactgcag ngcttgcagt tcaaacagaa ttgaaagaat 60
gcatggtggt taaaacttac ctcattagca gcatccctct acaaggtgca tttaactata 120
agtatactgc ctgcctatgt gacgacaatc caaaaacctt ctactgggac ttttacacca 180
acagaactgt gcaaattgca gccgtcgttg atgttattcg gggaattagg catctgccct 240
gatgatgctg ctgtaatccc catcaaaaac aacccggttt tatactattg gaaatcctaa 300
aggtaggaat aatgggaagc cctgtcttgt tttgccacac ccaggntgat ttcctctaaa 360
gaaacttggc tgggaatttc tgctgngggt ctataaaaat aaaacctttc tttaaccatg 420
gctttcttcc aaaaannaaa aattgtaatn ntanataaaa ataatggggn cccttgggcc 480
gcttcntann aaacttaagg tggggatccc ccccc 515

<210> 529
<211> 590
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 308, 430, 434, 446, 447, 472, 480, 482, 487, 496, 535, 536,
582
<223> n = A,T,C or G

<400> 529
aggtacgtcc aaatgacgaa gtcactgcag tgcttgcagt tcaaacagaa ttgaaagaat 60
gcatggtggt taaaacttac ctcattagca gcatccctct acaaggtgca tttaactata 120
agtatactgc ctgcctatgt gacgacaatc caaaaacctt ctactgggac ttttacacca 180
acagaactgt gcaaattgca gccgtcgttg atgttattcg ggaattaggc atctgccctg 240
atgatgctgc tgtaaatccc catcaaaaac aaccggtttt atacctattt gaaatcctaa 300
agggtagnaa taatgggaag ccctggtctg ttttgccaca ccccaggtgg attttcctct 360
aaaggaaact tggctgggaa tttctgctgt ggtctattaa aaaataaaac ttcttaacat 420
gctttctccn aaanaaaaaa agaggnnaaa aaatatacaa agggttacct tngggccggn 480
tnttaanaaa ctaagnggga atcccccggg gccttggcaa gggaaatttc cgatnnttcc 540
aaaggcttta ttccgaatac cccggttcgg aacccctttc gnaggggggg 590

<210> 530
<211> 822
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 55, 122, 288, 344, 349, 350, 385, 394, 404, 419, 421,
426, 430, 449, 469, 479, 488, 503, 539, 551, 554, 571, 601,
611, 627, 635, 647, 648, 662, 664, 667, 669, 672, 673, 676,
678, 679, 691, 701, 705, 709, 711, 715, 717, 721, 730
<223> n = A,T,C or G

<221> misc_feature
<222> 741, 747, 752, 753, 759, 766, 768, 776, 795, 798, 801, 806, 819
<223> n = A,T,C or G

<400> 530
tccaccgcgg tggcggccgc ccgggcaggt actcggggag gctcctgggg tggnntccaa 60
atcactcatt tgtttgtgaa agctgagctc acagcaaaac aagccaccat gaagctgtcg 120
gngtgtctcc tgctggtcac gctggccctc tgctgctacc aggccaatgc cgagttctgt 180
ccagctcttg tttctgagct gttagacttc ttcttcatta gtgaacctct gtttcaagtt 240
aaagtcttgc caaaattttg attgcccctt cccgggaagc tgttgccngc caagtttagg 300
gagttggaaa gaagattgca cgggatcaag attgtccctt tcangaaann gaaggcctca 360
ttttggccgg gaagttcctt gggtngaaaa aatnattttg aaangaaaaa tggttaagnt 420
ngttgntggn accaattggt taaaaaaana ccttttttcca atccccctng ggtttttcnc 480
aacttggntc ctttttcaaa ttngaacaac ccccttggat tcctttcaac cttggccang 540
aaaaátggtt naanaagggg tttttccaaa ncggttcttt tggcttttta aaattaaaaa 600
ntccaccttt nggccttctt tcccccnaga tgaantatgg aaacaannaa gaaaatttac 660
tntnttntnt annaangnng gtttcccctt ntgggtcccg ntttnttana ngaancntta 720
ntgttgggan tccccccccc nggggcnttg gnnaagggna aatttntnga atattncaaa 780
ggcttttatt ccgantancc ngggcnctac cccttcaang gg 822

<210> 531
<211> 768
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 38, 53, 57, 289, 372, 413, 422, 526, 537, 538, 545, 547, 552, 560, 570, 585, 587, 602, 612, 614, 633, 635, 648, 657, 666, 701, 708, 724, 749, 759, 760
<223> n = A,T,C or G

<400> 531
aggtacaaac ccagtttgtt ttcaaaaaat cacagngngc aatgcaactc atnactntat 60
aaaagcaagc ttaggctacc tgaaagattt tcccttggaa gtttagcgta tgtttgacta 120
acaagaattc cctacatcag agactctagg tgctatataa tccaaaaact tttcagcctg 180
ttgctcattc tgtcccatgc tggcaataat accttgtcag ccctttaccc ttattttgga 240
attgctccat ctcctggtgg ggacttggta tcttgtctgc catatcagna acacaatacc 300
cctgaaggag gttctgattt gatttttttt tttttcttca tgcctaccct ttttttggga 360
agttttccag cncgccaatt tttgaaaatt gaaaaattga caaagggtgg tantattttg 420
gnttccaaat tttgtcaatt ttccccaacc catttggcaa ttttaccaaa ccctttcttt 480
aaacctttaa aaatgggggg ttaaaccccc cttaaagggc caattntttc aaaaaannaa 540
aggcnangaa cnttggccan ttgaaattan aaaaccgggg aaaantntga aaaaaaaaaa 600
anggaaaccc tnanccattt tttatttttt tgncnttttt aaagccantt ccctttnact 660
tttttnaacc ccttttttat tgaagaaatt tggaagaagt ngggaacntt tacaattttt 720
cccntttttt tttaaccatt tttttccgna ataccttann tttttttt 768

<210> 532
<211> 476
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27, 31, 35, 36, 50, 55, 56, 251, 391, 401, 446, 475
<223> n = A,T,C or G

<400> 532
ccgggcaggt acccgtgccc aggaggncgc ngagnnccag ccccgagccn tgttnntttt 60
actctgccgt ggatgatgcc tcccacgaga aggagctgat cgaagcgctg caagaagtct 120
tgaagaagct caagagtaaa cgtgttccca tctatgagaa gaagtatggc caagtcccca 180
tgtgtgacgc cggtgagcag tgtgcagtga ggaaaggggc aagggatcgg gaagcctgtg 240
tgactgtccc ncgaggaacc tcctgcaatt ccttcctcct gaagtgctta tgaaaggggc 300
gtcccatttc tcctccatac catccccatc cctcttactt tccccagtag ggacccacac 360
ccttcctccc tgggagtttt ggctttaaag ncaacaagat naaggttttt tatttttcct 420
ctgaaagggg aaagggcttc tttttncctg ctggttttca aaaaaaatta aaaang 476

<210> 533
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 400
<223> n = A,T,C or G

<400> 533
ggagctccac cgaggtggcg gccgaggtac gcgggaacat caaactgtta atcgaatgca 60
ggctccaggg agaagcaact tcctgggtat gcgtgttaag agacaaaaaa tgatgacgtt 120
tgatgaccac tccaccagaa aagggaagaa agcctgaggg gactacgtgg acctccctaa 180
acacactgcg catgctccat tccaaacggt atggcgagca ctgcgcatgc gggaaaccca 240
ccctgtaagg gaagaatcct gggaaagagg cgagcctatg aagtcccagg atcaaggtta 300
gagacccttt ttttactgtc ttcttgtgct ctcttttctc tcttggacct tcaggcgcct 360
gcttgggtct ctttcaagcg aattttgctt tctttcctgn tctaaagcct tttaactaaa 420
c 421

<210> 534
<211> 421
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 400
<223> n = A,T,C or G

<400> 534
ggagctccac cgaggtggcg gccgaggtac gcgggaacat caaactgtta atcgaatgca 60
ggctccaggg agaagcaact tcctgggtat gcgtgttaag agacaaaaaa tgatgacgtt 120
tgatgaccac tccaccagaa aagggaagaa agcctgaggg gactacgtgg acctccctaa 180
acacactgcg catgctccat tccaaacggt atggcgagca ctgcgcatgc gggaaaccca 240
ccctgtaagg gaagaatcct gggaaagagg cgagcctatg aagtcccagg atcaaggtta 300
gagacccttt ttttactgtc ttcttgtgct ctcttttctc tcttggacct tcaggcgcct 360
gcttgggtct ctttcaagcg aattttgctt tctttcctgn tctaaagcct tttaactaaa 420
c 421

<210> 535
<211> 668
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 39, 55, 58, 67, 103, 114, 187, 265, 266, 304, 307, 318, 330,
358, 359, 366, 377, 379, 380, 388, 405, 406, 435, 438, 461,

466, 498, 499, 500, 509, 521, 532, 536, 562, 570, 578, 583,
584, 586, 616, 633, 637, 639, 640, 647, 652, 654
<223> n = A,T,C or G

<221> misc_feature
<222> 656
<223> n = A,T,C or G

<400> 535
ggtggcggcc gaggtacgcg gggaggctcc tggggtggng tccaaatcac tcatnganaa 60
gagaaanctg agctcacagc aaaacaagcc accatgaagc tgncggtgtg tctnctgctg 120
gtcacgctgg ccctctgctg ctaccaggcc aatgccgagt tctgcccagc tcttgtttct 180
gagctgntag acttcttctt cattagtgaa cctctgttca agttaagtct tgccaaattt 240
gatgcccctc cggaagctgt tgcanncaag ttaggagtga agagatgcac ggatcagatg 300
tccnttnaga aacgaagnct cattgcggan gttcctggtg aaaataattt gaagaaannt 360
tttgtngaga ccatgtnann aacttttnat cctggtttcc actgnntttt caatgacacc 420
ctgatcttca actgnagnaa tgttaaggtt ttcaactgtt ntttgntttt aataaaattc 480
actttgctct tccaaaannn aaatatttng ttttttccc ncccccttact tntagngtac 540
cctgccccgg gccgggctcc gnttttttaan aacttagngg ggnntncccc cccggggcct 600
gccagaggaa attttntatt ttaaagcctt tantccntnn ccaggcngac cntngngggg 660
gggggcc 668

<210> 536
<211> 668
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 45, 69, 86, 89, 92, 102, 112, 152, 159, 164, 165, 166,
225, 245, 261, 267, 271, 272, 276, 280, 290, 302, 303, 323,
351, 366, 392, 411, 416, 437, 438, 457, 467, 480, 483, 486,
521, 524, 529, 534, 540, 548, 550, 556, 562, 578, 584
<223> n = A,T,C or G

<221> misc_feature
<222> 585, 602, 606, 610, 612, 613, 622, 629, 644, 648, 649
<223> n = A,T,C or G

<400> 536
ccgggcaggt actcgngggg caaggtcatc cctgagctga acggnaagct cactggcatg 60
gccttccgng tacccactgc caacgngtna gnggtggacc tnacctgccg tntagaaaaa 120
cctgccaaat atgatgacat caagaaggtg gngaaacang cgtnnnaggg cccactcaag 180
ggcatactgg gctacactga gcaccaggtg gtctcctatg acttnaacag cgacacccac 240
tcctncacct tcgacgctgg ngctggnatt nncctnaacn accactttgn caagctcatt 300
tnntggtatg acaacgaatt tgnctacatg caacagggtg gtggacctga nggcccacat 360
ggcctncaag ggagtaagac ccctggacca cnggccccag caagagccca ngacgnagag 420
agagaccctc actgctnntg aagggcgtgc cacactnagt tccccancaa acttgaattn 480
ttnccnttct cacagtttgc atgtaaaccc cttgaaaagg nganggtgnt aaangagccn 540
tacctttntn attttncctt tnggccgggt tttaaaanta ggtnngattc cccccgggcct 600
tngaangaan tnntaatttt cnaaccttna accgaattcc cggnttgnnc cctaaaaagg 660
gggggggg 668

<210> 537
<211> 637
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 216, 268, 310, 342, 350, 379, 409, 425, 431, 443, 492, 532, 562, 591, 595, 598, 609, 636
<223> n = A,T,C or G

<400> 537
aggtacaaac ccagtttgtt ttcaaaaaat cacagtagca atgcaactca tcactctaga 60
aaagcaagct taggctacct gaaagatttt cccttggaag tttagcgtat gtttgactaa 120
caagaattcc ctacatcaga gactctaggt gctatataat ccaaaaactt ttcagcctgt 180
tgctcattct gtcccatgct ggcaataata ccttgncagc ccattaccct tattttgaat 240
tgctccatct cctgggtggg gacttgtnat tcttggtctg ccatatcagg aacaccaaac 300
ccctggaagn aggttctgca tttggattct tttaggtggg gntcttccan ggccttaccc 360
cttttttttt gggaaagtnt tccaggcccg ccaatttttg gaaaaatgna aaatggacca 420
agggnggtat ntttttcgga atncaaattt tttccatttt cccacccaat ttggccattt 480
accaaaccct tnttaaactt taaaaatggg ggttaaaccc cttaaaaggg cnattaattc 540
aaaaaagaaa aggccaggga cnttgccatt gtaataaaaa accggggaaa nttanganaa 600
aaaaaaaang aaaaccctta ccaattttaa tttttng 637

<210> 538
<211> 822
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 43, 58, 59, 61, 71, 74, 195, 216, 278, 376, 385, 393, 458, 482, 515, 539, 543, 569, 582, 588, 592, 627, 631, 638, 640, 644, 664, 665, 688, 710, 716, 733, 737, 742, 745, 747, 748, 763, 765, 800, 808, 811, 815
<223> n = A,T,C or G

<400> 538
aggtacgcgg gatcaatgac atggtcacgg aaggcaagtn ggntgacttc aacggaanna 60
ntatctcctt nctnaactgg gaccgtgcac agcctaacgg tggcaagccg agaaaactgt 120
gtcctgttct cccaatcagc tcagggcaag tggagtgatg aggcctgtcg cagcagcgaa 180
gaggtacata tgctnagttc accatccctc aatagngtct ttctccaatg tgtcctccaa 240
gcaagatttc atcattaacc ttatagggtt tcatgaanct ctaaaggatc aaaggttaaa 300
aaattcataa aattttttta cttttattta aaaaaaaatt tgccaaacca ccaaaaggaa 360
tcaaattggt tcccanttag gccanaatta atnggaatta ggcaattcaa ggcccaaaat 420
tttttttggc cttaaaacca ccaatttttt ctttttttngg gggaattttt ttggcccctt 480
tncccttggg ggggttaaat aaaggggggg aattncaagg aaaaaattat tttggaatnc 540
ccnattgttg cccacccgcc cagaaattna aaaaaatggg gncttttntt gncttaaaaa 600
ccaaggacct aaaaaaaatc cctttttnctt nctcttangn cccntttttct tcaacctttt 660
ggtnnccccct ggccccccggg gcccgggncc cgccttctta agaaaccttn aggttnggga 720
aatcccccccc ccngggncct tngtnanngg gaaatttccc canantttcaa aaggccttta 780
attcgaaata ccccggttcn gaaccccntc ntaangggggg gg 822

<210> 539
<211> 580
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 101, 278, 292, 304, 316, 339, 350, 353, 355, 371, 417, 472, 507, 509, 512, 515, 525, 527, 528, 532, 535, 539, 542, 548, 558, 566, 579
<223> n = A,T,C or G

<400> 539
aggtacaatc tanttaaaca agcagaatag cactaggcag aataaaaaaa ttgcacagac 60
gtatgcaatt ttccaagata gcattcttta aattcagtat ncagcttcca aagattggta 120
tgcccataat agacttaaac atataatgat ggctaaaaaa aataagtata cgaaaatgta 180
aaaaaggaaa tgtaagtcca ctctcaatct cataaaaagg tggggagtaa gggatgctaa 240
agcaaaataa atgtaggttc ctttttttct atttccgnat tatcatggca gnctgcttct 300
tttngataat ggcctnaggg gttacccccca tttttaagnt ttaggagggn ttngnaaatt 360
gccaaatggt nggggaaatg aaaaaatttg gaattcaaaa tatttaccac cctttgntca 420
atttttccat ttttcaaaaa ttttggccgg gcctggggaa aaaccttttc tncaaaaaaa 480
aaaaaagggg gttaaggggc caattgnanc gnaanaataa acacntnnta tnttngttnc 540
gnaaattnca tgaaaacnct ttcttntcca aggggggggnt 580

<210> 540
<211> 419
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 315, 323, 352, 411
<223> n = A,T,C or G

<400> 540
aggtacgcgg ggccgggcgc ggtggcgcgt gcctgtagtc ccacctcagc ctcccatcct 60
tgtctaccta attaggcttt gtgtaactca gtgttgcaaa gcttttgaca tctgtttgag 120
ttaatgttta tatatgttgt tacttaaggg tttcacatta aatttaaaca tacttatatt 180
ttataaccaa acaagtcata ttggggcata ctcattagga ttgagtgctt tcttacacca 240
aaatacatgt atacaaaaga tttaaaacac ttttcggccc gctcttagaa actagtggga 300
tccccccgggc tgcanggaat tcngatatca aagctttatc cgaatacccg tncgaccctc 360
ggaggggggg gggccccggt accccagcct ttttggttcc cctttttagt ngaaggggt 419

<210> 541
<211> 597
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 30, 40, 55, 73, 217, 221, 232, 308, 370, 382, 400, 401,
426, 440, 472, 489, 505, 538, 561
<223> n = A,T,C or G

<400> 541
accgcggtgg ccggccgang taccatcttn cgagatactn attcacgtca aaatnctcct 60
gcaccggagg atnggggcac ttcccaagat gaaatgcttg tccctctgcc gcaccgaaga 120
ggccagccag tgcggaaagc agcagcagca gcatcaccat cttggggctg ggtggctgga 180
gaaggaacct ggagcttttc tttcaagatg aaggcangtt ntccagatgc anaatcagcc 240
cgatttgaga tgcctgtctt ggtgacctgg cctctcccaa gctccccgcg atacctgccc 300
gggccggncg ctcttaggaa ctagttggga atccccccgg ggcctgcaag ggaaatttcg 360
gaatatacan aggcctttat cngatacccg ttcgaccctn ngaggggggg gggcccccgg 420
gttacnccaa gctttttttgn gtccccctttt ttaagtggag gggtttaaat tngcggccgc 480
ctttgggcng taaaatcaat gggtncaata agcctggttt tccctggtgg atgaaaantt 540
tggttaatcc ccgcttccac naaattttcc caccaccaaa accataaccg gaagccc 597

<210> 542
<211> 787
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 207, 223, 246, 306, 315, 325, 328, 439, 448, 470, 487, 488, 491, 494, 502, 519, 537, 538, 552, 555, 559, 560, 565, 582, 595, 608, 630, 673, 675, 696, 710, 721, 724, 726, 727, 729, 734, 739, 751, 756, 758, 761, 762, 769, 770, 773
<223> n = A,T,C or G

<400> 542
ccgggcaggt acacaagagt ttgtcagaca aataaaataa gaatacttca cacacgtatc 60
aacaccatac aaggcattat tcttcacaca gtaacatcta atgtgttctt ttatttttga 120
aacagcagga aaagagccct ttcccttcag aggaaaataa aaactttatc tgttgcttaa 180
gccaaactcc agggaggaag gtgtggncct ctggggaaag tanagggatg gggatgtatg 240
gagganaatg gaccgcccct tcataaagca cttcagggag gaaggaattg caaggagggt 300
ttcctngggg acagntcaca cagantttncc cgatccttgc ccctttcctt cactgccacc 360
acttgcttca ccggccgtca caccatgggg ggacttggcc cattactttt ctttcttcaa 420
taagaatggg ggaaacacng tttttacntc ttggagcctt ttttttcaan gacttttctt 480
tggcaanncg nctntcgaaa tncagcttcc tttcttcgnt gggggaaggg ccaattnnaa 540
ttcccaccgg gncanggann ttagnaattg tcccaagggg gncttcgggg gggcnttggg 600
gaagcctncg gccgttccct tccttggggn caacgggggt taaccctttc gggccccggt 660
ttcttaagaa aantnagtgg ggaaatcccc cccccngggc cttggccaan gggaaatttc 720
ngantnntna aagnccttna ttcggaataa ncccgntncc nnacccttnn aanggggggg 780
ggggccc 787

<210> 543
<211> 718
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 310, 331, 389, 401, 431, 543, 565
<223> n = A,T,C or G

<400> 543
aattggactc caccgcggtg gcggccgagg tacagaaccc gaccaaagta ggctggtgag 60
gaagtccagg ctccagggga acagacgctg cccagtgttc atagcttcct gcaacttgac 120
agagcctgag tttgcctctt agtgggagaa tgagagagag ctgtagtgtc acctgacatt 180
ccccaaacct tgtgaagcac gttggcctaa gtgtgccgtg atcccagccc acactagcct 240
gggtgcatct gctaatggga gaccaaatct ttgtcccggg aagcaagaag tgggtgggga 300
gtaatcgagn cggcccgccc gggcaggtac ngcggggatg attctgaggg agccggtgaa 360
gccacccacc agggaggcat gaaaaatgna aaagggacag nggcctgacc agacagtcct 420
tgacaagagg nacgaagaaa aaaaagaaac tcgaaaaact tggcctgcaa tgggatttgg 480
gaactacagg aaggataagc ttgagaaaat tcagcccaaa agggggcttg actgtcattt 540
ggnagccggt gggcacttgt taaangaagc cagcccatca ccattgatcc tgtttttca 600
ccacttcact tggaaaggac accattttta tataccccaa gggggcggga aaagttaaaa 660
actttactat tttcatttaa aatgttttga caccaatttg ggaaattggt ctttttaa 718

<210> 544
<211> 200
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 20, 21, 26, 28, 32, 43, 50, 52, 54, 57, 67, 68, 70, 78, 87, 109, 118, 151, 190, 197
<223> n = A,T,C or G

<400> 544
aggtacccng ggaccagtan nttggnanac antgccttct gtnttctcgn gngngcnctt 60
gctccanntn ctgttcangg ccagccntgg caccctgctc ctggttctnt gcctgcantt 120
gggggccaac aaaatgctca ggacaacact nggaagatca taataaagaa ttttgacatt 180
cccaagtcan tacctgncag 200

<210> 545
<211> 170
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 46, 58
<223> n = A,T,C or G

<400> 545
ctcccacact tttgtatccc tttaacatag ggactaaatg ctcccnttgg tcgtaaanca 60
tggggtcata ttcttgtaat catgtgggct tttcttttac ttaaattttg atccttgatt 120
tctccttgcc tcttcttgta gtccaatgct gatctctgtt atggggcgtt 170

<210> 546
<211> 621
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 45, 68, 113, 278, 294, 318, 319, 363, 474, 483, 517,
523, 527, 549, 554, 578, 614
<223> n = A,T,C or G

<400> 546
ccgggcaggt acgcgggagg gtggcccaac tggaccagct cctnnactac aggaagaagt 60
cagctgantt tccagacttc tatgattctg aggagccggt gagcacccac cangaggcaa 120
gaaaatgaaa aggacagggc tgaccataca gtcctgacag aggacgagaa aaaagaactc 180
gaaaacttgg ctgcaatgga tttggaacta cagaagatag ctgagaaatt cagccaaagg 240
ggctgactgt tcattggagc ggtgggccac tgtttaanaa gcagccatca catnatctgt 300
ttttccacca cttcactnna aaaagacacc catttatata ccccaagggg ccaggaaagt 360
aanaacttac tatttcatta aaatgtttgg accaccaatt tgggaattgt cttttaattt 420
tcttgtccaa gaaatggctt atttggaaaa atgtgaaatt gccattggac tttngtagcc 480
atnattttct tttttctgcc aaaaattatg accattnatt tanaccnttg gcctttattg 540
accaaattna accntggtgc cttaacttgg ccttttttngg ggaaaaaaaa tgtttttggt 600
tcctttaaaa tttngggaaa a 621

<210> 547
<211> 700
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 308, 329, 478, 494, 504, 525, 528, 575, 585, 610, 611,
613, 623, 632, 643, 649, 653, 656, 662, 668, 676, 678, 680,
684, 685, 686, 692, 694
<223> n = A,T,C or G

<400> 547
aggtacaaac ccagtttgtt ttcaaaaaat cacagnagca atgcaactca tcactctaga 60

aaagcaagct taggctacct gaaagatttt cccttggaag tttagcgtat gtttgactaa 120
caagaattcc ctacatcaga gactctaggt gctatataat ccaaaaactt ttcagcctgt 180
tgctcattct gtcccatgct ggcaataata ccttgtcagc ccattaccct tatttttgaa 240
ttgctccatc tcctggtggg acttgtatct tgtctgccat atcaagaaca caaacccccct 300
gaagaggntc tggatttgga tttttttnt cttcatgcct accctttttt tggaagtttt 360
ccaagccgca atttggaaat ggaaatggac aagggtgtat tattttggat ccaaattttt 420
cattccccac cattgcatta ccaaccttct aactttaaaa tggggtaacc ccttaaangg 480
ccattattca aaangaaagc cagnactgca ttgaataaaa ccggnaanat taagaaaaaa 540
aaaaggaacc ctaccatttt tattttttgg gcttntagcc aattnccttt aactccttaa 600
accttttttn ntnggaagaa ttnggagaag gnggggacct ttnaccaant ttnccncttt 660
tntttaanca tttttncntn tatnnncctt antntttttt 700

<210> 548
<211> 700
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 308, 329, 478, 494, 504, 525, 528, 575, 585, 610, 611,
613, 623, 632, 643, 649, 653, 656, 662, 668, 676, 678, 680,
684, 685, 686, 692, 694
<223> n = A,T,C or G

<400> 548
aggtacaaac ccagtttgtt ttcaaaaaat cacagnagca atgcaactca tcactctaga 60
aaagcaagct taggctacct gaaagatttt cccttggaag tttagcgtat gtttgactaa 120
caagaattcc ctacatcaga gactctaggt gctatataat ccaaaaactt ttcagcctgt 180
tgctcattct gtcccatgct ggcaataata ccttgtcagc ccattaccct tatttttgaa 240
ttgctccatc tcctggtggg acttgtatct tgtctgccat atcaagaaca caaacccccct 300
gaagaggntc tggatttgga tttttttnt cttcatgcct accctttttt tggaagtttt 360
ccaagccgca atttggaaat ggaaatggac aagggtgtat tattttggat ccaaattttt 420
cattccccac cattgcatta ccaaccttct aactttaaaa tggggtaacc ccttaaangg 480
ccattattca aaangaaagc cagnactgca ttgaataaaa ccggnaanat taagaaaaaa 540
aaaaggaacc ctaccatttt tattttttgg gcttntagcc aattnccttt aactccttaa 600
accttttttn ntnggaagaa ttnggagaag gnggggacct ttnaccaant ttnccncttt 660
tntttaanca tttttncntn tatnnncctt antntttttt 700

<210> 549
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 18, 56, 90, 150, 193, 329, 332, 369, 386
<223> n = A,T,C or G

<400> 549
agtttcagaa cgacgganag ctcccgcgtg aggctgctgc ccctcctggg cgccgncctg 60
ctgctgatgc tacctctgtc gggtacttgn tttttttttt tttttttttt ttttaaattt 120
gttcactgac caactggttg ttcaggagcn cgttgtttaa tttctggata tttatgaatt 180
ttctgaaatt ccncctgatt gatttctagc ttcaaactga aaatatattt gatataattt 240
ctatctttct taattttact gaggcttgtt ttgttttcta acatatgatc tatcctggag 300
aatattccat atgcaattga gaaaaatgng cnttctgttg ttggattgaa tattctggat 360
atatctacna gtctttttag agttanatta ctacctttct ctgttctcat cttaacatca 420
tcatgatgga catttttatt tcatgatcaa tggattttct ctcatcaaat aaa 473

<210> 550

<211> 211
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 6, 46, 71, 83, 98, 100, 119, 128, 144, 145, 157, 160, 165, 169, 173, 175, 177, 178
<223> n = A,T,C or G

<400> 550
nccggncagg tactcactat gtgaagtcta ccaagctcgt gctcanggga accaagacga 60
atagttagaa naaaaagagc atnaaaaata aaaaaaanan aaaaagtact ctgcgttgnt 120
accactgntt cccgggactc tgcnntgtta ccactgnttn ccggnactnt gcntngnnac 180
cactggttcc cgggactctg agttgatacc a 211

<210> 551
<211> 851
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 14, 15, 30, 35, 100, 167, 200, 231, 258, 261, 292, 301, 303, 328, 339, 343, 371, 378, 411, 418, 512, 514, 529, 542, 551, 573, 591, 595, 607, 608, 609, 634, 644, 663, 664, 673, 676, 677, 683, 702, 706, 721, 724, 731, 739, 741, 743
<223> n = A,T,C or G

<221> misc_feature
<222> 758, 766, 780, 783, 785, 786, 787, 800, 802, 804, 809, 816, 821, 826, 829, 840
<223> n = A,T,C or G

<400> 551
ccggncaggt actnnttttt tttttttttn ttttngacta tttattcact atggcaattc 60
cagtgccttg agtgatgcct ggcttatcat gggagctcan cacataacaa atgcatacat 120
gaatacggat tctccctctc accccaatcc cttgggatat gctctantat ccactgactc 180
ctactctcct ggctgcctgn aaaggtaggc atgcccaccg atgtcgctga ncagcatgac 240
cttggtgttg gcagggangt nctgcttgaa gactggacgc tgctcctctc cnattagtgt 300
ntnggggtgc ccaaaaacat ccaacacntt ggcaggtgnc ggntcaaaca aatgaaacca 360
acctttagca ntaactgnca caaacaggtt ctttccttta ttacacacgt ncccaacncc 420
aacgcaagtc agcattccct ggcaggaaca gggtgaacca agggcccgac tgtcatcatt 480
ttttatacac agacaccttt cccgctggtg tntnccacca ccaggttcnt ttaacgtatc 540
gntatttaac ngtttcctag gcaaaattgc ttnccgggaa agaaagcttt nctgnttgaa 600
atttcannng gccacgccgc ttgaacgtaa gctnaaattg aacnttatgg ggcaccttcc 660
aannaaacca aanggnngcc ggnaaggccc ccaaaaaaaa antttncctt gaaacctttc 720
nggnggggaa nccccccgna nancttgggc ccgttttnaa aaaaantggg gaatcccccn 780
ggngnnnggg ggaaattccn ananaaaang gttttntaaa nacccnggna accctttttan 840
ggggggggcc c 851

<210> 552
<211> 416
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 42, 44, 82, 83, 109, 113, 138, 155, 169, 187, 204, 215, 217,

326, 405
<223> n = A,T,C or G

<400> 552
aggtactgga ggcatgtgcc aacacacctg tctaattttt gngntttttg tagagacagg 60
gaaatcacta acagttactc tnnataacta cttgttaagt taacctacna atnaaaaatg 120
gcatgaagct tttactgncg gggggaagtt ttcanatgtt actacaacnt taagcccaat 180
accttgngag agaaaccaac atanattgca cacananctt atttgcaaag tgcatatggt 240
ctaagaggcg ataggatatg caaaataacc ataatgtagg atagaaaata aggatgtatt 300
aaggagcaca catgaaatcc tattanagtt aagagaaggt agatagagct cacttgtttt 360
cagatgtggt ggttcctaaa tcttgagaca ggagaaaaat agatnggctt agggat 416

<210> 553
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 67, 69, 70, 109, 123, 124, 125, 132, 135, 150, 151, 158,
160, 163, 165, 166, 171, 174, 180, 186, 187, 188, 192, 207,
210, 213, 216, 224, 225, 230, 231, 236, 239, 240, 242, 243,
253, 254, 258, 264, 277, 283, 284, 285, 287, 288, 301
<223> n = A,T,C or G

<221> misc_feature
<222> 302, 306, 313, 318, 319, 320, 327, 329, 335, 338, 355, 357,
358, 362, 364, 372, 375, 380, 382, 389, 394, 395, 404, 419,
423, 429, 431, 451, 458, 470
<223> n = A,T,C or G

<400> 553
aggtactttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 60
ttttttngnn tttttttttt tttttttttt tttttttttt ttttttttnt tttttttttt 120
ttnnntggaa ancanatttt tttttaaaan naaaaccntn aancnntccc nttntaccan 180
aaaaannngg gnggctttaa aaaaaanggn aanccncaaa aaannttttn natatnccnn 240
annaaaaatt ttnnaaantt tccnacaaaa atttccnaat aannngnntt tttttaaaaa 300
nnaaantttt agnggggnnn ttttccncnc aaaangtngt gttaaaaaat ttttnanngg 360
gncnaaaaat tnggnaaaan tnaatattnt aaannggtgt ttanaaaaaa aaaaaaaant 420
tanaaaaanc naaaaaaaaa aaaagaaggg ngaaaaanat aaaaattttn acc 473

<210> 554
<211> 679
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 16, 496, 546, 550, 552, 588, 596, 605, 634, 637, 657,
662, 664, 665
<223> n = A,T,C or G

<400> 554
aggtactngg ggttgnttag cagaggccgg aagcggtggt ttttagcggc tctctgggta 60
gcagggtggt gtgatagcgg cagcgagggg ctcggagagg tgctcggatt ctcgtaactg 120
tgccgggact taaccaccac catgtcgagc aaaagaacaa agaccaagac caagaagcgc 180
cctcagcgtg caacatccaa tgtgtttgct atgtttgacc agtcacagat tcaggagttc 240
aaagaggcct tcaacatgat tgatcagaac agagatggtt tcatcgacaa ggaagatttg 300
catgatatgc ttgcttcatt ggggaagaat ccaactgatg agtatctaga tgccatgatg 360

aatgaggctc caggccccat caatttcacc atgttcctca ccatgtttgg tgagaagtta 420
aatggcacag atcctgaaga tgtcatcaga aaatgccttt gcttgctttg atgaaaaaac 480
aactggcccc atacangaag attacttgag aaaagctgct gacaccatgg ggggatccgg 540
ttacanaatn angaagtggg atgaactgta cccttgcccc gggccggncg ttttanaaac 600
ctagngggat cccccgggcc tgccagggaa atcnaanatt aaaaccttat ttggatnacc 660
gntnnacctt taaaggggg 679

<210> 555
<211> 319
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 9, 15, 18, 48, 55, 63, 64, 65, 66, 75, 79, 82, 86, 87,
88, 89, 94, 95, 154, 167, 168, 171, 174, 179, 181, 193,
195, 214, 222, 228, 298, 299
<223> n = A,T,C or G

<400> 555
anctccgcng gcggngcncc cgcggcaggg acacacgagc atcaaggnaa caggnctgag 60
gannnnaaac gactntgtna tnagannnna gaannaatat tgctcacacc tgctacacct 120
tcttgggagc caagggaagc cttttctgca atcnccccat tttgatnnaa nctnatcanc 180
natggcttgg gcnancaaaa tatttaaagg tctntttccc anctcttnca cttatctact 240
acataaggct atagcaatta aaaagtcttt cctttcctgc cgccgtacca tgggtccnnc 300
ttgggtagca acttagtgg 319

<210> 556
<211> 483
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 235, 267, 441, 460, 461, 462, 473, 480
<223> n = A,T,C or G

<400> 556
aggtacgcgg ggtggcgaaa cgctgtctct actaaaacta caaaaattag ctgggcgtgg 60
tggcgcgtgc ctgtaatccc agctactcgg caggctgagg caggagaatc gcttgaactg 120
gggaggtgga ggttgcagtg agccgagatc acacaactgc attccagcct gggtgacaga 180
gggagactcc gtctctaaaa aacaaccccc cccccccaaa aaaaaaaatg catancaagc 240
tgtaatgctc tttgtgtttt agaatantag aggtctggaa agttgtttgc ttttccccag 300
tttttttttg ctgtgttacc tctgaaggga attgaggtag aggggagagt tagaaggaat 360
attcggcttt tctattttat atcctcctag gtgaaatttt tacaacaaac atgtacctgc 420
ccgggcggcc gaggtacttt nttttttttt cttatttgcn nnccactttt tgnatttggn 480
aat 483

<210> 557
<211> 746
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 555, 576, 591, 600, 644, 650, 651, 654, 665, 675, 687, 724,
734
<223> n = A,T,C or G

<400> 557
cgcggtggcg gccgcccggg caggtacgcg gggatagccg tttgagggaa gaaggaggaa 60
aattacccgg tatcgttaga gctacaccaa aattgcattg agccaaactt gccaccaaga 120
gcccaacaat caccatgatg ctgagcacgg aaggcaggga ggggttcgtg gtgaaggtca 180
ggggcctacc ctggtcctgc tcagccgatg aagtgatgcg cttcttctct gattgcaaga 240
tccaaaatgg cacatcaggt attcgtttca tctacaccag agaaggcaga ccaagtggtg 300
aagcatttgt tgaacttgaa tctgaagagg aagtgaaatt ggctttgaag aaggacagag 360
aaaccatggg acacagatac cgttgaagta ttcaagtcta acagtgttga aatggattgg 420
gtgttgaagc atacaggtcc gaatagccct gatactgcca acgatggctt cgtccggctt 480
agaggactcc catttggctg tagcaaagga agagatttgt tcagttcttt tcagggttgg 540
aaattgtgcc aaatngggat gacacttgcc agtggnactt ttaaggggcc naagcaccan 600
gggaaagcct tttgttgcag tttttgcttc acaaggagga atanccttan naangccttt 660
aaagnaaacc ccaangggaa aagaaantat ggggccccaa ggttaccctt tgtccgcttc 720
ttanaaacct aggngggatt cccccc 746

<210> 558
<211> 664
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 82, 237, 255, 256, 342, 363, 405, 415, 528, 529, 530,
533, 541, 553, 557, 582, 600, 601, 614, 621, 630, 631, 634,
641, 643, 651, 658
<223> n = A,T,C or G

<400> 558
aggnacctct cggaggggcc ctcctcctgc tccatgggga tccgcagcgc cagccggcca 60
gggtttgaat tagtcattgt tnggaggata caaatagatg aagatgggaa ggtttttcca 120
aagctggatc ttctcaccaa agtcccacag cgagccctgg agctggacaa gaacagagcc 180
atagaaactg ctcctctcag cttccgaacc ctggtaggac tgcttggaaa tctgaanctg 240
ctctggaaag ccctnnataa aatccgcttt gttgcaagag ggaggaacaa ctagttccaa 300
aaacagttgg aacgttggta ggcatgaaag catgcttgcc gntgggaggg aacatgtcaa 360
atntttattc aattattaaa acattttgct atttttctgc ttagnaaacc acacnccttg 420
gaagaccgtg cctgtctatg gcagatttat gggcaccatt attatgggaa actcttcatg 480
acatggaaaa aattaaatac caactagttt aagttataaa aatgccannn tgnctttact 540
nataccacct ggngctnaaa ttatggatcc cttttaccaa cntccccgc ccctttaaan 600
nttttttaa aaanaacaaa nggttccccn ntgnccgggg ncntggggcc ntttttnaa 660
aaaa 664

<210> 559
<211> 427
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 398
<223> n = A,T,C or G

<400> 559
ccgcggtggc ggccgcccgg gcaggtacct gttttgtttc ctgattattc caggattctc 60
tcactagacc ctaagcctct cattctgctg taggtcagat tctctattcc ttctccctag 120
cccagagcct tgccagcact tgcgaaagtt acggttagaa tgttcccttg cctagtcacc 180
tctttgaaaa aaacactgtg atgttacatg actgcgattc aaatcagaca ctgtctgctt 240
cccacatgta tctcagacag gttttattta atgtttcttg tcagaatatt gtaaattcaa 300
aaggatgact ttaaataaat gtaaacaaag acaaacttgt ggtcttttg tctggaatta 360
ctttcacaag agatggagct tgcaggggaa tttactgnct gaccagttac taatggtgag 420

cccttgc 427

<210> 560
<211> 426
<212> DNA
<213> Homo sapiens

<400> 560
acgcggatct ttcccaactt taaatactct tttagtttct atagggaagg aagagttatt 60
acaggttttt tttttaatta ttctttaact ttagatactg ccaatctgat ttaaaattct 120
ccaagcttaa ttctgtgcaa caaacagaac cacacaagca gccaggcact gtggctcact 180
cctataatcc cagcattttt gaggctagat gggaagatca cttgatctca ggattttgag 240
aaccatccgg acaacatagg gagacctcat cgctatttta aataatttta aaaagaaaag 300
aaaaaaaaag gccaaagtgc tgggattata ggcgtgagct accgcgctcg gccattatat 360
ctagattttg aaacctcatg tttgtttacc aagtagtaac aggtgtacca gcagcttcca 420
ggaata 426

<210> 561
<211> 411
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 8, 133, 134, 146, 258, 274, 296, 323, 335, 336, 350, 355, 368, 375, 401
<223> n = A,T,C or G

<400> 561
ccgggcnngt acgcgggaag tgcggggcag gacaaagggc tctttgcaca gcagggaggc 60
aatgttggtg ggggaggggc aggaggtagg aaaggcaaga ggaggaggtt cttttccctg 120
ggagattatt canntttggc atacanttaa agaaatcatt tttagttccc actcaagcat 180
tgaatttttg ccaaccacat actattaacc ccaaatttga tacatttcag aatatcttgt 240
agggatccat tctcgccnta aaaaaaataa taanaaaaaa aggtccctcg gctcgntcta 300
gaactagtgg atcccccccg ggntgtagga aattnntata tctaagcttn ttcgnataac 360
ccgctcgnac ctttnagggg ggggccccgg gttccccaaa ntttttggt t 411

<210> 562
<211> 845
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 86, 96, 134, 145, 158, 181, 188, 192, 225, 255, 284, 298, 354, 359, 365, 370, 373, 386, 392, 400, 409, 426, 465, 490, 504, 509, 518, 522, 523, 539, 548, 560, 567, 571, 581, 583, 589, 590, 606, 610, 623, 630, 644, 686, 697, 711, 720
<223> n = A,T,C or G

<221> misc_feature
<222> 725, 727, 732, 733, 742, 746, 750, 751, 755, 758, 759, 761, 769, 775, 778, 779, 780, 786, 787, 792, 793, 795, 796, 803, 804, 809, 810, 811, 830
<223> n = A,T,C or G

<400> 562
ccgggcaggt actttttttt tttttttttt tttttttttt tttacgttaa aaaaagtttt 60
atttagggag ctccagggaa tgcggnggga aagganaggt gcagtgtcat tgccgccctc 120

tcctcccacc tagngcatta atagnggatg ggagcatntg acagaagtga gatcaggcag 180
ngggtgtntg cnccccacag cgcatgttgg ctggaacagc aaagnctatc tgctgaggtt 240
taggcaagtt caggntgccc atgattttga caaactcctc acanctgagg gtgagccnag 300
ggttcaaagt ccttttcttc tccacggggg acactgtgaa cccatggtaa tcgngagcng 360
ggtanatcan acngcctcct ggaagngtga anatcttttn atggccccna gtggtgcaag 420
gtcttngcac aaccttgctt ggaagaactt ccgcccaccc ccacngatca aacaggggca 480
tcttccaatn aaagcccatt cttntgggnc attttcangg annaaaaggg gacaccaanc 540
cttggggntg gtggcccaan gggggtnggc nccttggttc ntnccaacnn cggaaaaacg 600
cccccnaaan cgggattggg agntctcccn tcccccaaat gggntaaaag ttcaaccctg 660
ggggcccccc ctaaaaggcc gggaanaaac cccccntcc ccttgggccg ntttttgaan 720
aaaantnggg tnncccccg gncttntaan naaanttnna nttttcacnc ttttnaannn 780
cccccnnccc cnnanngggg ggnnccccnn nccccccccc tcttttttn ccctttttggg 840
ggggg 845

<210> 563
<211> 617
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 30, 70, 101, 104, 114, 115, 308, 421, 424, 456, 494, 541, 547, 569, 574, 593
<223> n = A,T,C or G

<400> 563
cgancgggca ggtacttttt tttttgttgn tttttttttt ttggcttatc acacctgatt 60
ttctacagtn agcataagtt gcacatggat aataacacac nttnttaaaa ggcnnaaaca 120
acaactatga tcacaattta aaggcagaaa agtgctatta tcttaacaga acatggaaca 180
tccatgttct atgataataa taaagttagg caaagttaat atcaaataac ctgatattca 240
atagcctagt ttttaattag ttttagtaac acatatggaa gaatctgtta tgaataaaaa 300
accatgtngg ccgggcacgg tggctcacgc ctgtaatccc agcactttga aaggccaagg 360
caggcagacc acgaggtcag gagttcgaga ccagcctggc caacataagt gaaaccccgt 420
nttntactaa aaatacaaaa attagcccgg catggnggct tgtgcctgtg atgccagcta 480
cttgggggc tganggagga aaatcacttg aactttggag gcggaaggtt gcaatgagac 540
nagaatnggg gccctgccct tccaaaccnt gggngacagg aaccaaggac ttncattttc 600
cgggggaaaa aaaaaaa 617

<210> 564
<211> 452
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 46, 50, 58, 79, 84, 86, 103, 104, 109, 118, 122, 124, 128, 136, 139, 144, 149, 153, 157, 202, 204, 213, 218, 224, 230, 244, 251, 254, 255, 262, 265, 271, 272, 274, 276, 279, 287, 293, 294, 298, 303, 314, 318, 319, 344, 352, 354
<223> n = A,T,C or G

<221> misc_feature
<222> 355, 366, 367, 373, 375, 384, 388, 389, 403, 435, 436, 439
<223> n = A,T,C or G

<400> 564
aggtactttt tttttttttt tttttttttt tccctatttc tcangntttn attttcanac 60
tttgctaatt actttcttnt aaangncttc attttcaatg aanntttttnt agccattntc 120
antntttntg ttttancana cccntttana ttnttcncat ttagcatagc aaatgttata 180

tttaatttta tttcttgacc cncntaaggt tcntaatnaa ccgnatgggn ttttggttac 240
cccnttttta naanngtatt anccnatttg nnananttnt tacccanccc ccnnttgnta 300
atntggagac ttangacnnt ccaaaaaaag gtataccctc attntgaggg cncnncaaaa 360
acccannttt ttncntttat ttgnaaanna aaaaggtaac canttttccc caattcaagg 420
aaagacttgg ggggnnaana ttttcccggc cc 452

<210> 565
<211> 750
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 121, 125, 134, 230, 334, 375, 408, 428, 487, 520, 530, 559, 562, 585, 587, 590, 636, 649, 651, 658, 669, 689, 694, 698, 709, 711, 715, 717, 719, 736
<223> n = A,T,C or G

<400> 565
aggtactttt tttttttttt tttttttttt tttatgagat ggaatcttgc tctgtcaccc 60
aggctggagc atagtggcat gatctcagct cactgcaacc tccaccttcc gggttcaagc 120
nactnttgcg cctnagccac ccaagtaact gggactacag gcatgcacct ccacgccctg 180
ctaattttta tatttttagt agggatggct ttcaccatgc tggccttaan tgatccgtcc 240
gccttggcct ccaaagtgct gggatttcag gcaagcgtta ccacacccga cccctcacta 300
gtatttcagc attaatgttc cctctttaac cagngcttat tatgagtata cacaaacaac 360
attgcctgac ataanaacaa gttgaaccca cagtggaatc cctacagngg cagacagtgg 420
cagctganag tgacagacca acggggggaa aagccacaag ccatctcctg taagcttcac 480
tgccatnacc tgagctcatg gcacacacct gctttacctn taagcgaggn gctgctcttt 540
acattaccac tctgggaana ancaggccca accaaacccc accangncgn tttagctttt 600
caagggaccc caagacacat gtgtataaaa agccanttgc atgtggtgng nggggggnat 660
gaaatatant gccaaatatt taccatggng gganaggngg gggggaaant naggnantnt 720
aaaaaaagct tttggnggga aaaagaaaaa 750

<210> 566
<211> 547
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 329, 330, 331, 332, 339, 348, 363, 364, 374, 379, 397, 413, 430, 437, 449, 450, 456, 472, 484, 485, 491, 493, 500, 509, 515, 517
<223> n = A,T,C or G

<400> 566
ccgggcaggt actttatatg acttgaatat gttaaaacat atcaaaactt gtttcatggc 60
ccagaatatg gtctgtattg gtaatatgtt tcatgtgcac ttgagaagaa taaattttgc 120
tgttgttgag tagtcttcta taaatgtcaa ccaagttaag ttggttgata gtgtttttca 180
tgtctactat atccaggctg actttatgcc tacttgttct atcagttatt aagagaggac 240
tatcgaagtc cccaatgata attgtggatt tgtctgttat tttttgtaag ttgtatcagt 300
ttttatttaa ttgattttgg aaccttttnn nnctagggnc atagaacntt taaggatggc 360
canngtcccc taanttacnt gaaccccctt ttcattnttg aaatgaactt ccntgggatc 420
tttggtctgn aaagccnttt tgggccaann taaaanaaga cgcccgcagc ancttttttgg 480
gggnnctagg ntnaaactan ggtatatcnt ttttncnatc ccctttaacc tttttaagga 540
attttgg 547

<210> 567
<211> 182

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 41, 48, 51, 62, 64, 66, 77, 78, 79, 80, 84, 85, 90, 149
<223> n = A,T,C or G

<400> 567
agctccaccg tggtggcggc cgccactctg gttttgcatc ntcagganac ngctcggggc 60
cngngngctt ctcctannnn aatnnttttn tataagtggc tcacgccttc catagccaca 120
tcatctcggt tcgaaataga accccatana gaggtaggtt gtaggaggcc tgcaggtacc 180
ta 182

<210> 568
<211> 63
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 3, 12, 20, 34, 37, 51, 55, 61
<223> n = A,T,C or G

<400> 568
nanggaattt cnatatcaan gcttatcgat tacncgncgt accttagagg ngggnggccc 60
ngg 63

<210> 569
<211> 149
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 34, 58, 98, 108, 109, 129, 134, 135, 138, 142
<223> n = A,T,C or G

<400> 569
agctccaccg cggtggcggn cgaggtacgc ggtngcctgc gccctctcct ataaagcnga 60
cgccgagccg cgctgcgacg ctgtagtggc ttcgtctncg gtttttcnnt tccttcgcta 120
acgcctccng gctnncgnca gnctcccgc 149

<210> 570
<211> 55
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 37, 46
<223> n = A,T,C or G

<400> 570
atgcacgaat tctgatatca agctttatcg atnccanttt accttncagg ggggg 55

<210> 571
<211> 556
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 234, 237, 268, 334, 341, 349, 366, 375, 381, 399, 402, 409,
428, 433, 461, 462, 466, 475, 517, 519, 525, 544
<223> n = A,T,C or G

<400> 571
aggtactgtt taatcttctc catggggcta acagagtgag tgttaagagc agtgtggcca 60
tcctccagct cacttggccg aacactcagc tccgggatgg ttcgaacgaa tctggggtga 120
cttattggga gatacttgaa tgtcttcatg tctcgcccgc caatcactcg ggcagtgacc 180
gtcttcccaa ccttcagctt ggtagtagga gaggtgccct ctggaacatc attntanaat 240
gtgggaggca tggatacagc caaataantg cccatcttcc agagttcaca accacatggg 300
ggtaggcctt taaattggac cttggaccag ttcnccttgt ngaaccaant gtcccccgaa 360
tgggangagg ggtgntgctt ntttatgggt ccccttacna gntcaagang cttgggaatc 420
cacttttntt tcnatccctt cattcaaacc tggttcttca nnaagnttcc tttcntgggg 480
ttccgggccc ttcaatgggg acccttcttt gggcaantnc cgggngcccc cctttccacc 540
aagnccccaa aaaagg 556

<210> 572
<211> 881
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 117, 122, 123, 124, 132, 138, 141, 143, 156, 159, 163, 164,
173, 177, 178, 189, 191, 199, 208, 209, 210, 211, 212, 215,
216, 217, 223, 234, 248, 253, 274, 283, 288, 289, 301, 307,
312, 314, 317, 322, 325, 326, 341, 343, 361, 362, 364
<223> n = A,T,C or G

<221> misc_feature
<222> 370, 374, 376, 379, 392, 393, 397, 399, 403, 408, 409, 416,
422, 434, 440, 444, 446, 450, 451, 452, 459, 470, 476, 480,
481, 486, 491, 492, 510, 513, 515, 521, 522, 527, 533, 535,
541, 559, 564, 566, 570, 571, 576, 579, 582, 584, 592
<223> n = A,T,C or G

<221> misc_feature
<222> 594, 597, 604, 605, 609, 611, 614, 617, 620, 627, 641, 647,
654, 660, 662, 668, 688, 690, 691, 722, 731, 736, 737, 754,
757, 766, 779, 794, 795, 796, 797, 803, 804, 814, 815, 818,
819, 827, 829, 830, 831, 832, 835, 840, 846, 847, 855
<223> n = A,T,C or G

<221> misc_feature
<222> 856, 863, 867
<223> n = A,T,C or G

<400> 572
tccaccgcgg tggcggccgc ccgggcaggt acttttttt tttttttttt ttttttttgt 60
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt ttttttnatg 120
gnnnccactt tnttgccnaa ncntggaact tggggnaanc ctnnaccttc aanaacnngc 180
aaaaaaaang ntggggggnt tttgggannn nnccnnnccc aanggggaaa ctgnccgggg 240
aaattccnaa acngggaaca ggggggggtc cccntgaccc ccnaaaannt ttttcccccc 300
ncccttnggg gngnggnagg gnacnnaaaa aaaaaatggc ntnccagggg tttttcccat 360
nntncctaan cccncnatng gggccccatt tnnaaantnc ccnggggnng ggaaangttt 420

tnggaaaacg gctncccaan aaantntccn nnccacccng gggtttttn ttaaancttn 480
ntcccnaacc nntttgcctt tttttacccn ttnanaaaaa nnggccncca cangnggggg 540
nccaaaaaaa aaataacana attncngggn naaaanttnt tntngggggg gnanatnttt 600
tttnntttng ncanttnggn agaaaanggg aaaaaagggg ngctttnccc ccancttttn 660
gnaaaccncc tttttaaagg gggaaacngn ncccccccttt tttttttttt tttttttcc 720
cntttaaaaa naccannccc cctttttttt tttnccnatt tttgcncccc aaatttttnc 780
ccggttcctt tggnnnnttt atnnaaaaaa aaannggnnc ccccccngnn nncgngggan 840
ttttgnnttt atcannttttt ttnttcnccc cccccccccc g 881

<210> 573
<211> 573
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 84, 154, 270, 327, 353, 357, 389, 425, 443, 460, 473, 488,
492, 494, 495, 521, 541, 546, 552, 554, 555
<223> n = A,T,C or G

<400> 573
ccgcggtggc ggccgaggta cttttttttt tttttttttt ttttttaagg aaaaggagac 60
tggaagaaga aaaataagta tttntggcag aacttccgaa agaaccagaa aggaataatg 120
agacagactt caaaaggaga agacgttggt tatnttgcca gtgaaataac gatgagcgat 180
gaggagcgga ttcagctaat gatgatggtc aaagaaaaga tgatcacaat tgaggaagca 240
cttgctaggc tcaaggaata cgaggcccan caccggcagt cggctgccct ggaccctgct 300
gactggccag atggttctta cccaacnttt gatggctcat caaactgcaa tgngagntta 360
tcatgtcttt gacatcttga tcacctacnc cgataaggga cagtcttcac cattttagtc 420
tttgnatttc ttttcgaaac ttncgactcg cacctgggtn tgcaaaagag ggngtcttgt 480
tcatatanaa tngnntattt tctctaccct gacagagact naattttaca gtcaaaaata 540
ngggtnatca tncnnggggg ttttggtttt ttt 573

<210> 574
<211> 518
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 33, 55, 90, 133, 148, 182, 186, 191, 235, 258, 270, 299,
300, 311, 315, 324, 337, 345, 368, 429, 436, 440, 469, 488,
492, 501
<223> n = A,T,C or G

<400> 574
accgcngtgg cggccgaggt acaatctact tantcaagca taatagcact aggcngaata 60
aaaaattgca cagaccgtat gcagattttn caagatagca ttctttaaat tcagtattca 120
ccttccaaag atnggttgcc cataatanac ttaaacatat aatgatggct aaaaaaaata 180
antatnctga naatgtaaaa aaggaaatgt aagtccactc tcaatctcat aaaangtgag 240
agtaaggatg cttaaaanca aaataaatgn gaggttcttt ttttttctta ttttcccgnn 300
ttattcaatg ncaantcttg cctnctttg ataatgncct ttaangggt ttacccccat 360
ttttaaantt taaggaaggg tttggtaaat ggcctaattg gggttggggg aaatttggaa 420
aaaaatttng aatccnaaan ttattaacca cccctttggt ccatttttnc atttttcaa 480
aaaatttngc cnggcttggg naaaaacctt tcccaaaa 518

<210> 575
<211> 369
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 22, 29, 66, 85, 93, 115, 120, 131, 142, 144, 161, 174, 209, 217, 225, 231, 234, 241, 243, 247, 252, 269, 280, 284, 286, 287, 290, 296, 298, 299, 301, 319, 321, 344, 364
<223> n = A,T,C or G

<400> 575
ccggncaggt acattccatt anttttcant gtcacctaag ggtcaaggtt taggggcctg 60
acacantagt gtcactcagg ctgtngcccc agntgtaaat atcaacaagg aactnttttn 120
tcctacccag nggttttgtg tntnctgcag tattcataat ntataaaaga atgnttaact 180
gtgaagtgaa atcatatcta caagtcccnt acaacanttt acttnacaaa nacnattatt 240
ntnccanccc tnaactcaaa aaagccacnc aaatacttan agtntnnttn ccaaantnnc 300
ncacaagctg gtccttgang nacaaaaagg tctttcccaa agangccttg ggctcaggga 360
aaangcccc 369

<210> 576
<211> 762
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 236, 240, 258, 271, 292, 301, 303, 336, 356, 370, 385, 438, 440, 442, 445, 460, 461, 481, 482, 488, 491, 493, 519, 523, 535, 536, 540, 555, 564, 569, 576, 584, 601, 614, 615, 621, 624, 635, 647, 649, 671, 691, 692, 737
<223> n = A,T,C or G

<400> 576
aggtacaatc tagttaaaca agcagaatag cactaggcag aataaaaaat tgcacagacg 60
tatgcaattt tccaagatag cattctttaa attcagtatt cagcttccaa agattggttg 120
cccataatag acttaaacat ataatgatgg ctaaaaaaaa taagtatacg aaaatgtaaa 180
aaaaggaaat gtaagtccac tctcaatctc ataaaaggtg agagtaagga tgctanaagn 240
caaaataaaa tgtagggntc ttttttcta ntttcagtta tatcatgcca gnctgcttct 300
ntntgatatt gcacttaggg gttacccatt ttaaantttta ggagtgttgt aaatgncaaa 360
tggttggggn aatggaaaag atttngattc aaaattaata ccacccttgg tcaatatttc 420
aattttccaa aattggcngn gnctngggta aaaccttttn ncaaaaaaaa aaaggggggtt 480
nngggccntt ngnaaggaaa aaaaaaaaaa aaaaattcna aanatttcag taaannctttn 540
tttttaggg gggtnttggg tgtnttctng aattanttgg gccnggaact aaaggaaata 600
nccaaagttc cccnncccaa nggnaggaat tgggnaagcc caatttntna aaaaattaaa 660
gggggttaaa ntgggggcct tgaccaaggg nnaatttaat ttggcccaag ccattggggg 720
gaccaagaaa attggancca accaaggggc tttgaaaaaa gg 762

<210> 577
<211> 343
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 68, 75, 76, 77, 87, 88, 89, 90, 94, 95, 96, 97, 98, 103, 104, 107, 108, 114, 117, 119, 124, 126, 127, 131, 135, 136, 140, 142, 148, 156, 158, 159, 160, 161, 166, 167, 168, 169, 170, 171, 172, 173, 174, 176, 177, 178, 182, 200, 201
<223> n = A,T,C or G

<221> misc_feature

<222> 202, 203, 205, 206, 209, 217, 224, 229, 235, 236, 239, 240, 244, 249, 250, 254, 262, 263, 268, 278, 280, 281, 283, 292, 296, 304, 310, 312, 313, 315, 316, 320, 325, 328, 329
<223> n = A,T,C or G

<400> 577
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 60
ttttttttnaa aaaannnttt tttttttnnnn tggnnnnnag ggnnaanncc cccncantnt 120
tttnannaaa ncaannaaan anctttcngg ggggananann ntttttnnnnn nnnnannncc 180
tngggggggca aaaaaaaaan nnngnnccnt tttttttnggg gggnccctng gaaannccnn 240
ccanggggnn tttnaaaaaa anngcccntt tttttttancn ntntcccccg cnaaanaaaa 300
aaantccccn anngnncccn ggggnccnna aaaaaggggg ggg 343

<210> 578
<211> 601
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 342, 372, 387, 436, 441, 448, 482, 501, 520, 538, 554, 569, 585
<223> n = A,T,C or G

<400> 578
aggtacacaa gtaacctgct ttgtctgccc taagcggtgg gccctgtcca tggcctgctg 60
gtccacagtg gggttccagt cgctatcata gaaaatcact gtgtctgcag cagtgagatt 120
gatacccagt cctccagctc gtgtgcttaa caggaacaca aagatgtcat tcctgttctg 180
aaaatcaagc aaccatgtct cgcctctccg agatcttgga tgagccatca agcctcatgt 240
aagtatgctt cctgtaaacc atgtattcct ccagtaggtc tatcatcctg gtcatctggg 300
agtagataaa ggaccctatg cccttgagac ttgagccgag tnagcaggac atcaaggggc 360
atacaagctt tncctgtcag tgatgangct tctccttgcc tggaatcctg atgaaaagaa 420
ccagcccatt cttgangtct naatgctnca cagaaccttc caagctgggc ttttggggaa 480
anaaacttgg ggaatcggtc ntattttaag cccagttctn gcaagcccaa gtttcaangg 540
gggcccccat tttnaacaaa aaaactggnt ttgggcttgg ccaanaactc ccttcctttc 600
c 601

<210> 579
<211> 835
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 309, 377, 378, 439, 441, 493, 514, 614, 615, 649, 671, 688, 717, 726, 727, 730, 742, 745, 752, 786, 791, 798, 804, 812, 813
<223> n = A,T,C or G

<400> 579
ccgggcaggt accatagttt ttaaacagga aaaaatactt tacttttgac taaaaactgg 60
ccagaatttc tcatacttct cattttaggg ctttagatct ctgcatcccg aagcacaaat 120
ttaaatataa aaattagatt aactgttcgt atgtctatca gaatcaaagt ttttttcctt 180
tttaaagatt tgtgggttac cctaatataa gctagaattt tagttttata atttttttct 240
tttttaaaat tgagatgggg tcttgctatg ttgtccaggc tggtctcaaa ctcctgggct 300
caagtgatnt gcctgcctcg gcctcccaaa gtgctgggat tataggcgtg agccaccgcg 360
cccggccaaa ctagaanntt aatatttttc acctcctccc aatcaggtag aacatcaata 420
gactggaaga agatactgnt naagatgttt cttttaacaa aaaatttcac acgccaaaaa 480
tttaagattt ttnccattat tgaagacatt attntcaaaa atctttccta taacactttt 540

tagggggaaga aggtggaaaa aaatacctta aaaaggtcgc atcttaaccg ggggggctca 600
cttgaccgat atannttctt tagaatagaa aggtcattca cccccaaang gtctttatta 660
attttaaatt naaggttaaa aacccacngg aggacccttt attaaacacc attttcncca 720
acctcnnaan ggctaatttt tnttnctttc cnatattcca aaacattcaa accaaatttt 780
gatgantcat ncccaatngg gctngtaaaa annattgacc ccaaaaactt ttttt 835

<210> 580
<211> 368
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 45, 46, 50, 56, 57, 61, 66, 68, 71, 73, 77, 88, 89, 111, 117, 119, 123, 125, 132, 135, 136, 141, 142, 143, 144, 147, 148, 149, 150, 154, 159, 162, 167, 168, 178, 180, 181, 182, 183, 185, 188, 197, 201, 202, 203, 204, 205, 208
<223> n = A,T,C or G

<221> misc_feature
<222> 210, 212, 213, 214, 215, 218, 220, 221, 222, 224, 225, 234, 236, 237, 240, 246, 252, 261, 266, 269, 270, 271, 273, 274, 278, 282, 283, 286, 287, 288, 289, 292, 297, 298, 300, 301, 303, 312, 313, 314, 320, 323, 330, 338, 341, 343, 344
<223> n = A,T,C or G

<221> misc_feature
<222> 348, 351, 352, 353, 355, 357, 368
<223> n = A,T,C or G

<400> 580
ccgggcaggt acctnttttt tttttttttt tatttcaaaa taaannttan aaaaannggc 60
nacctnantg ngntttnttt tttttttnna aaaaaccctt tttgattttt naccccncnc 120
ttngngcaat gntgnnaata nnnnttnnnn gaanctttnc cncccanntt aaaaaaantn 180
nnntnccnaa acccccnaaa nnnnnggnan tnnnnggntn nnanncccccc cccngnnaan 240
tttttnaatt tnaaaaaaaa nggggnttnn ncnntttngc cnnggnnnnt tnaaaanncn 300
nancttttaa annncccccn ttngcccccn aaaagggngg nannaaangg nnnangnccc 360
cccccccn 368

<210> 581
<211> 774
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 34, 37, 38, 39, 51, 62, 63, 65, 72, 78, 79, 80, 81, 82, 85, 91, 92, 93, 95, 96, 97, 104, 108, 109, 110, 114, 117, 118, 122, 123, 124, 132, 136, 141, 142, 150, 152, 153, 154, 155, 166, 167, 168, 175, 176, 181, 182, 186, 188, 197, 220
<223> n = A,T,C or G

<221> misc_feature
<222> 221, 222, 224, 235, 236, 247, 260, 261, 262, 267, 285, 315, 321, 324, 330, 331, 335, 337, 340, 341, 343, 344, 350, 351, 354, 359, 361, 365, 372, 373, 383, 387, 391, 392, 398, 403, 407, 411, 419, 422, 424, 429, 431, 436, 450, 455, 457
<223> n = A,T,C or G

<221> misc_feature
<222> 471, 475, 478, 479, 490, 495, 496, 501, 507, 513, 514, 515, 523, 527, 535, 537, 538, 540, 544, 548, 549, 552, 596, 597, 598, 602, 611, 613, 627, 628, 634, 664, 684, 685, 694, 708, 710, 723, 726, 735, 737, 738, 739, 747, 748, 754, 755
<223> n = A,T,C or G

<221> misc_feature
<222> 759, 773
<223> n = A,T,C or G

<400> 581
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aggtactttt tttttttttt tttttttttt tttnaannna aaaaaaaaaa nttttttttt 60
tnngnaaaaa anaaaatnnn nnggnccttt nnnannnccc cccntttnnn tttnggnntt 120
tnnnaaaaaa anaacntttt nnaaaaattn gnnnnaaaaa aaaccnnntt ttttnntttt 180
nngggncngg ggttttnccc cccccccccc cctttttttn nnanccccccc ccccnngggg 240
gggaaanttt tttccaaaan nnggggncca aaaaaaaaaa aaaantttc ccaaaaaccc 300
aaaattttta aaaancccccg nccntttttn naaangnccn ntnnttttttn nggnaaaang 360
ncccnttggg gnntcccggg ganccencccc nntttttnag ggncccnccc nttttttttnc 420
gnanacccnc nccctngggg ggccccaaan acccntnggg gggggaaaaa ncccnaanng 480
gataaaaaan ccttnnggtc ngggggnaaa aannnaaaat ctnccanggg gcttnannan 540
aaantttnnc cnctttcctt ttcccccagg gggaaaaagg ggaaattttt tttaannnaa 600
anagggcccc ncnggggttt tttttannng tttnaaaaaa aaaaaatttt tttaaaaaaa 660
aaanattccc cctttttttt tccnnggggg ggcnctttaa aaaaaaangn gaaccccccc 720
cgnccngggg gaaantnnnt tttaaanntt tttnnttanc cccccccccc ccnc 774
```

<210> 582
<211> 823
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 11, 26, 55, 89, 94, 96, 100, 101, 107, 114, 115, 119, 123, 125, 126, 132, 136, 145, 148, 149, 156, 158, 163, 167, 169, 170, 180, 182, 189, 191, 198, 205, 208, 211, 212, 215, 218, 221, 233, 234, 238, 251, 274, 282, 286, 287, 308
<223> n = A,T,C or G

<221> misc_feature
<222> 310, 314, 316, 317, 325, 326, 329, 335, 403, 445, 450, 474, 478, 488, 490, 494, 504, 551, 560, 561, 567, 568, 580, 581, 594, 607, 644, 647, 648, 661, 663, 667, 686, 705, 706, 716, 758, 771, 777, 781, 784, 788, 792, 799
<223> n = A,T,C or G

<400> 582
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angtacccgg nggcggaaac cacccnttca aacgtctgcc ctatcaactt ttaanggtat 60
tccccgtcct accatggtga ccgcgggtna cagngnaatn naggttnaat ttcnnagang 120
gancnngata anctgntacc acatntanng aaggcntnac gcncgcnann taaaaatgtn 180
anctaaaana ngaaatangt ttgtngcnga nntanctntt naaaataagg tcnncccnga 240
gtaggggtaa nacctccaac atgactggta tccntataaa anggannggg ggggacacaa 300
aaacactntn acangnntaa tgccnnatnc tgatnaccgc agaaattggg gtattgtttc 360
tattacccca gggaatccca attttgccag tgacccccaa aantttaagg agaagcctgg 420
aacaaattct tctgcacaag tcctnaaaan gaaccagctt tgcttaaccc cttnattnta 480
aactgccngn cttncaaaac tganaataaa attcctgtta tgttaagctt gccctttgt 540
gggggctttt ntttgggccn nccttttnncc aaatttattn naaaaccccg gccnttgaaa 600
aaaaggncca aaattttttt tcctaaaaaa gccttggggc tggnggnngc atttcttgca 660
ntncccnttt cttttggccc tgggcncttt aatttaaggc ctttnncctt tttganttta 720
```

tttcccttg gcccccaaaa taaacttcaa cccttgcncc ccttaaaaat naaatgntga 780
nttntttnaa anccgtggnt ttttttcccc catttttttt ttt 823

<210> 583
<211> 461
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 21, 37, 107, 214, 228, 241, 303, 414, 453
<223> n = A,T,C or G

<400> 583
atggagtctt gctctgttgc ncaggctgga gtgcagnggc gcgatctcag ctcactgcaa 60
gctccgcctc ccaggttcac gcctcccagg ttcacgcctc ccgagtngct gggactacag 120
gcgcccgcca ccatacctgg ctaatttttt gtattttcag tagggacggg tttccgccac 180
gttggccagg atagtctcaa tctcctgaac tcgngatccg ccctcctncg cctcccaaag 240
ngctgggatt acaggcgtga gccaccgcac cgggcctctt gtcactattt aacaaagcat 300
aanggctcct ctctgcctac tctaccagat ccatgctctt tagcctgcca ggccaggctg 360
tccctacctc acatcccctg atcagctaca ttataatcta aggcctatct cctntttaac 420
cctgaacgta cctcggcccg tctagaacta agngggatcc c 461

<210> 584
<211> 216
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 20, 36, 59, 61, 69, 73, 78, 91, 93, 96, 106, 115, 139,
149, 160, 169, 195
<223> n = A,T,C or G

<400> 584
atgaagtttg ttttgncgan aaattaggtt acttgngtat caaagcttat ttttaaatng 60
ngttagggng tanccaancc ctttattcta nanatncttt agctgnatta ctaanacata 120
gctagtatct ctacttaang ctctgggtng taaacagggn ctttccatng ttctaccttt 180
aggatttcaa tagtntaaaa ccggttggtt tttgat 216

<210> 585
<211> 475
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 27, 250, 430, 435, 440, 442, 445, 447, 448, 449, 450,
451, 470
<223> n = A,T,C or G

<400> 585
tccccgcggt ggtngccgcc cgggctngta cgcgttcatc tgtaatctca gcctcccgag 60
tagctgggac tacaggcgcc tgccaccaca cccggctaat tttttgtatt tttagtagag 120
atgggtttta ccatggtctc gatctcctga cctcctgatc tgcccaccct ggcctcccaa 180
agtgctggga ttacaggcgt gagccactgc gaccggccca ctttttcttt ttacttttaa 240
aaatgtgggn taatagaaat ttatgagatt atatttatgg ttcatactac gtttcttttg 300
gacagtgcca gagtgaatca gataagcttg cattttaaaa tcctaagggt aaatgcaata 360
gagatagaac gcaaataatt ggggaggggg gttgactgaa attaaagatg tattaatcca 420

aaagaaggcn caaantaaan anaancnnnn nggtacctcg gccgctctan aacta 475

<210> 586
<211> 845
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 513, 667, 668, 681, 709, 720, 731, 741, 754, 762, 774, 783, 789, 794, 821
<223> n = A,T,C or G

<400> 586
ccgggcaggt acttcaattg aatccagatt ttatttgtat ttcatttctc aatattttct 60
cctctacaaa aacagagtga agttgtaaga atactagacc caagtttcaa aatctcatgt 120
taagtgagat tttgcatgtc ctccgtaaaa tttctggagc actttataaa agtttatttt 180
cgtggaaatc aaaaaaccag gtcatgatat tcttttctaa gtccctaaac ctgtctaaca 240
atgcaaaggt tgtctgtcct tcttacatgt agactcattt gtctaagtgg gccttaacat 300
gtatgatttc catcaaggct gcttggcaaa ggctttctgt tagtgtgtaa ggggaatatg 360
atgaccaata taacaacctc agtatttcct ctacctctct tcaactcctc aacgtgaacc 420
caatgttttt gtggaacaca aagcctctga atgcctggga agtcaccagt gtgatcccag 480
ccaccaccca ttaatcttct taactagcat gtncctcatc attacctccc tttccaaagc 540
cctttgcatg tgcctgttcc ctggccagaa aagccctcaa ctaaatggcc caagaagcta 600
atggagaatt cccccccaaa aatggggaaa aattggaata ttaaatggag aaaagtttta 660
aaaaggnngc caaagatcaa ngccccggtg ccagtggtgg caccgcctng taatccccan 720
cccctttta naaggcccca ngttggggcc gggnttaaca anggtcaggg agantccgag 780
aanccattnc ttgngcttac aacggtgaaa acccttgtct nttacttaaa aatacccaaa 840
aaaaa 845

<210> 587
<211> 860
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 129, 214, 251, 281, 300, 322, 334, 335, 373, 378, 380, 394, 411, 412, 416, 426, 427, 454, 457, 479, 498, 504, 516, 518, 519, 520, 521, 535, 563, 572, 573, 598, 599, 605, 617, 622, 629, 645, 656, 659, 668, 672, 673, 677, 679, 690, 693
<223> n = A,T,C or G

<221> misc_feature
<222> 696, 697, 707, 718, 730, 741, 743, 762, 764, 793, 801, 804, 813, 814, 828, 852, 855
<223> n = A,T,C or G

<400> 587
aggtactttt tttttttttt tttttggcct tatatcagtt ttattggtgg gtttgtagct 60
ccctgggccg ggcctggctg cttaggccag tctcttgctc acgcgctcat aggtcacgcc 120
tccgatggng gagacctcca ccagcttgtc acccacgatc tctgaggtct ggtgatagtt 180
ggggaaattc accaccagct tcccgccctc catntgcaca gtggccttag aacgtcttgc 240
cccctattgg nctgtatgtt tgctttcctt gccaacagtg naacttgttt tggtcatggn 300
ggtggccccc gggagtagtt gnttggggac caanntgaaa gtcctgccca tccttgctgc 360
acctttccgg tgnaccantn ctttggaaag tttngccggg cccttttttc nngaantacc 420
atccgnnttg ggaggaatcc cccaaagggg aagnctnttc aatggaaacc ttccaattnc 480
aataaaattt tcttttcntc aacntctttc caattntnnn naaaactttg gcccngggtg 540
ggaaaaaagc ccaatggcct ggnttggggg anngcttttt tccctttta atggtggnnc 600

ttggnttttc aattttnttc tntgccaang gttctttcct ttttntccgg gcttcnacnc 660
ccattggngg cnnccgncna agaccaaaan aanaannttt tcccccncgg ccggttancc 720
cttgcccccn ggggcggggc ncngcttttt aaaaaactta angntgggaa ttcccccccc 780
cggggggctt gcnaggggaa nttnccaata ttnntaagcc tttaattncg gatacccggg 840
ccaaccctct tnaangggggg 860

<210> 588
<211> 833
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 58, 84, 93, 103, 129, 153, 154, 169, 175, 176, 179, 182,
192, 194, 195, 200, 204, 209, 220, 226, 234, 236, 241, 248,
255, 256, 263, 264, 265, 267, 269, 287, 295, 315, 318, 324,
328, 332, 339, 349, 351, 354, 358, 373, 379, 380, 385
<223> n = A,T,C or G

<221> misc_feature
<222> 394, 395, 396, 406, 426, 427, 428, 429, 430, 431, 437, 444,
446, 447, 449, 459, 460, 462, 463, 465, 470, 477, 487, 492,
507, 510, 529, 530, 535, 537, 540, 545, 550, 554, 567, 573,
584, 589, 595, 606, 613, 628, 636, 642, 643, 674, 675
<223> n = A,T,C or G

<221> misc_feature
<222> 689, 699, 737, 739, 742, 744, 756, 757, 759, 783, 800, 801,
803, 805, 812, 816, 818
<223> n = A,T,C or G

<400> 588
gctccaccgc ggtggcggcc gaggtactta tttttttttt tttttttttt tttttttnaa 60
ttgttttttt tttttttttt tttncctgtt tgnctgattt ttnttattta aaaaaatgga 120
aaaacaaang tgcatttttc attcaataaa tgnnccatcc ttatttagnt ttgtnnccna 180
angggaagtc cntnncttn gaanggatnt gcaatttatn aaccancagc aatncnttttt 240
nacaccgntt tcaannaacc tgnnncnant tttcccttga acctggnggg ggggnaaaat 300
ttctgaaaac tgggnggnag atcncccntt tnaaaagcnc ctttggggnc nttntacntt 360
gggccctgaa atngattcnn ccccnctttt ttannnccat ttcccntgga aaaccgttaa 420
aggggnnnnn nctttanaaa aaanannсnt gtcaaaagnn tnntntttgn actcttnacc 480
aaggccnatt anccccccaag gttttcnccn cttgggaaaa aattcttann aaaancntgn 540
ggttntgggn gganccattt gggggantttt tanccattcc cagncgggnc ggggnttccc 600
tttggnaccc ccntcccaat gggggccncc cgcttnttgg gnnaactttt ggcgggcccc 660
cgggaacttt ttannaagac cccccccccnt ttacccttnc cccggggccg gggcccgttt 720
ttttaaaaaa cttaaantng gnantccccc cccggnncnt ggcgaggaaa aatttttttaa 780
aanttaaaag cttttttttn nanancccccc cncacncnta ttaagggggg ggg 833

<210> 589
<211> 350
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 284, 304
<223> n = A,T,C or G

<400> 589
actgaaaacc ttgggataca cctaaagctg cagtcacaaa ttcacaatcc tgaatctttt 60

ctttaagaat aagcaaaaac caatgcatct tcaacgtaaa caatgttaaa gacgaacaca 120
ggccaggcac ggtggctcag gcctgtagtc ccagcacttt gggaggccaa ggcgggtgga 180
tcatgaggtc aggagatcga gaccatcctg gccaacactg tgtaaccccg tctctactaa 240
aaatacaaaa attagccgga tgtagttggt gttgcccctt gtantcccag ctactaggga 300
agcntgaggc aggaagagtt cccttgaacc ccaggaagcc cgggagggtt 350

<210> 590
<211> 857
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 111, 114, 116, 117, 119, 122, 127, 130, 133, 136, 138, 148,
152, 155, 160, 162, 163, 167, 168, 170, 172, 173, 176, 177,
178, 182, 184, 189, 190, 191, 198, 199, 203, 208, 209, 213,
215, 216, 227, 228, 232, 237, 238, 240, 241, 247, 254
<223> n = A,T,C or G

<221> misc_feature
<222> 259, 262, 264, 266, 272, 277, 279, 281, 282, 287, 290, 296,
300, 308, 317, 320, 322, 327, 331, 335, 341, 344, 345, 359,
361, 367, 369, 371, 382, 386, 389, 391, 394, 400, 401, 408,
411, 413, 422, 428, 429, 433, 442, 452, 454, 460, 471
<223> n = A,T,C or G

<221> misc_feature
<222> 475, 507, 510, 519, 520, 522, 531, 537, 555, 558, 567, 572,
573, 580, 584, 586, 589, 590, 605, 607, 608, 613, 622, 623,
624, 625, 632, 634, 638, 652, 660, 678, 682, 683, 684, 687,
690, 694, 695, 714, 715, 723, 732, 736, 744, 753, 756
<223> n = A,T,C or G

<221> misc_feature
<222> 763, 765, 766, 776, 786, 796, 802, 807, 808, 809, 810, 817,
820, 826, 832, 841
<223> n = A,T,C or G

<400> 590
actttttttt tttttttttt tttttttttt tctttttttt tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttttttt tttttttttt ttttaaaaaa nggngnntna 120
anaaaanctn ggnaanantc ccaagggnaa anggnaaaan gnngggnnan gnnggnnnaa 180
angnaaaann ncgctttnnt ttnccccnnc ccnannaaaa aaaaccnngg gnaaaanntn 240
ntaggtnaaa aaancaggna ancnancatt tnggggncnc nnacggnaan cccccngggn 300
gcccattnaa aaaaaanggn anccccnggg ngggngaaat naannacaaa cttttaaana 360
ncccaancnc ncgggggggg gncccnaanc naantttttan nccccttnaa ngngggtaaa 420
tncccccnng ganaaaaaaa angggcaaaa antnttcccn ggaaaaaaaa ngttnccccc 480
aaaaattcaa aaaaaaaaaa aaacccngan aaaaaaaann tnaaaaaccc nggggngcca 540
aagggggggga ccccnccnaa aaaaaanttt gnntccaaan cacncnccnn atttttcaaa 600
aaaancnnaa aanaccgtgg tnnnngccaa gntngaanaa aaaaaaaaaa anggaccacn 660
cccccccggg ggaaaaangg gnnnttnaan aaanntgggg gcccttattc cacnntttct 720
atnaaaaaaa anaaaanatcg gggngaaaaa ggnaanaagg ggngnngggg acgggntata 780
aaaacnaaac aaaaangggg gnaaatnnnn ttttccnaan aaaacnaggg gnaaaaaccc 840
naaaaaaaaa aaaattt 857

<210> 591
<211> 644
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 10, 11, 13, 28, 37, 40, 45, 54, 55, 56, 60, 61, 62, 64, 67, 74, 76, 85, 92, 108, 112, 115, 154, 157, 164, 169, 180, 182, 184, 191, 198, 207, 211, 217, 223, 237, 238, 239, 248, 275, 279, 323, 330, 346, 357, 376, 378, 383, 394, 413
<223> n = A,T,C or G

<221> misc_feature
<222> 419, 420, 424, 429, 437, 442, 453, 456, 464, 478, 483, 484, 494, 496, 513, 519, 533, 534, 540, 548, 549, 550, 552, 556, 564, 570, 579, 580, 592, 599, 604, 618, 623, 625, 629, 636
<223> n = A,T,C or G

<400> 591
aggtacgcnn nancttcagg ctccgaancg gtgtgtngcn gatcnaagcg ctgnnngaan 60
nntnganaaa cctnangagt aaacntgttc cnatctatga taagaacntg gncanatccc 120
catgtgtgac accggtgacc agtgatcatt gagnaanggg acanggatng ggaagctatn 180
tnantgcccc ngaagaanct gctgcanttc nttcctnctg aantgcttat gaagggnnnt 240
tacattcncc tgcatacatt cccatccctc tactntccnc atgaggacca caccttctct 300
ccctgagagt ttggcttaag canccagatn aagtttttta ttttcntttg aaggggnaag 360
ggctcttttc ctgctntntt cgnaaattaa aaanaaccca tttagatgtt tanccgggnn 420
taangaaana aatgccnttg tntgggcggg ttnatncctt gtantgaaag gatttctnaa 480
ttnntatttt gggnanaaca aaaacttttt tgnggtttnc cttgccccgg gcnnggaccn 540
tttttaannn ancttntggg gatncccccn ggggcttgnn aggaaaattt tnatttatng 600
gaanctttttt tttcgatncc cgncnaaanc tttaangggg gggg 644

<210> 592
<211> 485
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 46, 48, 197, 199, 346, 370, 378
<223> n = A,T,C or G

<400> 592
aggtactttt tttttttttt tttttttttt tgagacagag tctntntntg ttgcccaggc 60
tggagggtaa tggtgcagtc tcggcccact gcaatctccg cctcctgggt tcaagcaatt 120
ctcctgcctc agcctcccga gtagctggga ttacaggagc cgctaccacg cccagctaat 180
ttttgtattt ttagtanana ctgggttttt ccatgttggt caggctggtc ttgaactcct 240
gaccacaggt gatctacccg ccttggcctc ccaaagtgct gggattacag gcgtgagcca 300
ctgcaccggg ccttggattt ttggcattct ggaattttgg catggngggg gttctggctg 360
gaggtggaan catccgtntt ggccccactg gccttggggc caaagccctg gtccatcccc 420
aggccaagtc ctaccaaatc agctgctaag cctgaacaag cacttgaaag caggggtttg 480
gtctt 485

<210> 593
<211> 492
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 60, 86, 214, 239, 253, 322, 336, 343, 345, 392, 403, 421
<223> n = A,T,C or G

<400> 593
aggtactttt tttttttttt tttttttttt ttttggaggg gggagcctga aggtgacatn 60
ttgttggttt ggagatgatt tattcnctcg tattgtaaaa tctaaaatga cactcctggg 120
aagaggaagg aactataagg acccgtgtga cccattgctg tctgcctgaa gccctggcgc 180
tctgacctga gtgcaccggg gttaggtgtc tcanccaaaa tgcaggactg cacgacgtnt 240
aacacattgg ganagattgc tcttgaaaca tgggggtggg gtattcacct gcattccaaa 300
aagtttgggg ggattctggg anaccccagt tggagntcct tcngnacttt cacaagggcc 360
ttgtcttccc cacactttca aaatttccaa antcgttcct ttnacccaaa aaggtggggt 420
nagggagtca cctggactat tcaattttcc ccaaaaaatt cttaaaaaaa aagggagggt 480
ttaccccccgg gg 492

<210> 594
<211> 607
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 440, 479, 503, 525, 540, 558, 573, 586, 588, 592, 597
<223> n = A,T,C or G

<400> 594
aggtacgcgg ggaccgcagc ccancaactc gcaaacgcaa cctgaagcct gggctgcgca 60
gtgtgggagg gcttcgcgat cttgggggac ccattccgaa cttgcagagg accgtagctc 120
tcctggcctg gagagtgtga acaggattgt ggactcttcc aagattcaca atgatatggt 180
gaatccaaag actggaacca aaaagattta ctcagtgctt tagttttaac aacagtaaat 240
tgtctaccaa cacccatcat ggctaaaagt gcggaggtca aactggcaat atttgggaga 300
gcaggcgtgg gcaagtcagc tcttgtagtg agatttctga ccaaacggtt catctgggaa 360
tatgatccca ccctcgaatc aacctaccga caccaagcaa ccatcgattg atgaagttgt 420
tttccatggg aagatactan acacttgctg gtcagggaaa gataccattc agaagggang 480
gggcacatgc gatggggggg aangcttttt gtgcctggtc ttacnacatt actgaccgan 540
gaagtttttt gaggaaantg cttcccactt aanaaaacat tcttanantg angatcnaaa 600
aaagccc 607

<210> 595
<211> 693
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 94, 97, 100, 101, 102, 114, 116, 118, 120, 123, 134, 139,
141, 143, 144, 150, 151, 152, 156, 157, 169, 170, 174, 177,
180, 181, 182, 184, 197, 199, 201, 204, 205, 206, 207, 209,
210, 211, 220, 228, 229, 230, 232, 234, 235, 246, 247
<223> n = A,T,C or G

<221> misc_feature
<222> 249, 263, 264, 265, 268, 274, 277, 279, 280, 281, 288, 289,
291, 293, 297, 303, 314, 315, 323, 329, 332, 335, 336, 338,
339, 340, 347, 354, 356, 359, 366, 381, 382, 384, 398, 417,
422, 423, 434, 439, 441, 444, 445, 448, 451, 452, 453
<223> n = A,T,C or G

<221> misc_feature
<222> 464, 467, 474, 475, 480, 481, 490, 491, 493, 495, 496, 517,
520, 522, 523, 532, 533, 542, 543, 545, 546, 547, 548, 551,
556, 562, 566, 578, 579, 581, 583, 587, 596, 599, 600, 601,
602, 603, 604, 618, 622, 642, 648, 660, 665, 669, 672

<223> n = A,T,C or G

<400> 595
actttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttgcccg gggnaancan nntttttttt aaancnanan 120
ttnaaaactt ttanttttng nannaaaaan nngggnnttt ttaaaaaann gggnaanccn 180
nnanaaaatt ttttaantnt naannnntnn nttttttaan ttttttcnnn antnnttccc 240
aaaatnngnt ttttttttta aannnaantt taanccngnn ntttttcnnc ncnaaantgg 300
ggnaaaaaag tttnnggggg ggnaaaaant tnggnngnnn taaattnaaa aagngnttnt 360
tttttnaaaa aaaattttaa nncnttaaaa aaaaaacngg gggaaaaatg gggtttngct 420
tnntaaaaaa aaanggccnc ngtnnccnac nnnggaaccc cccnccncct ttannggggn 480
nttttttttn ntngnnccct ttcttttaaa aaaaaanagn gnngttttgg anncccccca 540
anngnnnncc nccccnaacc tngggncctt tttaaaannt ngngggntcc ccccgnggnn 600
nnnnaaattt tttttttnaa gntttttttt ttccccttta cntttttngg gggggcccn 660
gggcncccna anttttttttt tccctttttt ggg 693

<210> 596
<211> 427
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 111, 144, 160, 226, 236, 251, 252, 253, 256, 267, 305,
311, 320, 335, 344, 366, 378, 422
<223> n = A,T,C or G

<400> 596
ccgggcaggt accgggatcg ccgagacaag gtggcagcag gtgcttcnga aagcacacgg 60
tcaaatgaga ggaccgtcat tctgggaaag aaaacagaag tgaaagccac nagggagcaa 120
gaaagaaaca gaccagaaac catncgaaca aagccagaan agaaaatgtt cgattctaaa 180
gagaaggctt tcgaggtaga gaaacctaag atgggaagaa ttgacnaagt tagatnaagg 240
aagccgagac nnnaanagaa agcccancca gatgaaggga gaagggctaa gggaagaaag 300
gactncaccc ngaaagggan aaagaaccgt tgccnaagaa gaanaagagg gtgccccgat 360
ttagtnttag aaaggtantc ccccagggac aagaaagaag ccaaggaagg gtgttccccc 420
cntaaaa 427

<210> 597
<211> 561
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 64, 68, 71, 72, 80, 85, 91, 94, 95, 97, 99, 101, 103, 105,
106, 107, 112, 114, 118, 121, 123, 129, 131, 132, 135, 137,
138, 143, 146, 148, 152, 153, 155, 156, 157, 159, 177, 178,
180, 181, 184, 186, 188, 189, 190, 196, 198, 199, 204
<223> n = A,T,C or G

<221> misc_feature
<222> 207, 211, 214, 215, 219, 220, 223, 228, 230, 235, 241, 248,
249, 257, 261, 262, 266, 273, 277, 278, 279, 280, 290, 304,
305, 306, 310, 315, 329, 335, 337, 349, 353, 368, 369, 370,
374, 375, 376, 377, 379, 380, 381, 383, 385, 386, 392
<223> n = A,T,C or G

<221> misc_feature
<222> 394, 404, 406, 410, 412, 413, 415, 420, 426, 428, 437, 438,

445, 448, 450, 451, 452, 454, 469, 478, 481, 482, 489, 491,
497, 498, 503, 504, 507, 517, 525, 530, 536, 537, 540, 546,
547, 553
<223> n = A,T,C or G

<400> 597
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 60
tttngggncc nnggggaaan ttttnttttt nccnncngna ncnannnttt tncnaaancc 120
ngnaccccng nnttngnnaa aanccngnaa anntnnntnt tttgcaaaaa aaaaatnncn 180
ncangncnnn cctttncnnt ttgnaantcc nttnngccnn aanttaancn ccttncccat 240
nggggcannc ctttaangaa nntggnggtt ctncttnnnn cccctggggn aaaaaaaagg 300
gggnnnttcn ggggnagggg gggaaaaana caacncntgg gggggggnt ttnaaaaagg 360
cccccccnnn ccannnnann ntnannccccc tntngggggg aaantnacan anntntttcn 420
tggggngncc ccaaaanncc tgtgncgncn nnangatttt ggaggggtnc ttttttntc 480
nngaccccnt naacatnnag acnnggnttt gggtganccc cccgnccctn ttttannttn 540
ttctcnnccc ccnggggggg g 561

<210> 598
<211> 649
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 371, 462, 470, 547, 555, 560, 572, 577, 584, 622, 631
<223> n = A,T,C or G

<400> 598
aggtacaaac ccagtttgtt ttcaaaaaat cacagtagca atgcaactca tcactctaga 60
aaagcaagct taggctacct gaaagatttt cccttggaag tttagcgtat gtttgactaa 120
caagaattcc ctacatcaga gactctaggt gctatataat ccaaaaactt ttcagcctgt 180
tgctcattct gtcccatgct ggcaataata ccttgtcagc ccattaccct tattttgaat 240
tgctccatct cctggtggga cttgtatctt gtctgccata tcagaacaca aacccctgaa 300
gaggttctga ttttgatttt tttttttctt tcatgcctac cctttttttg gaagtttcca 360
gccgcaattt naaatgaaat gacaaggtgt atatttgatc aattttcatt cccaccattg 420
cattcaaacc tctaacttaa atgggtaacc ctaaggcata tnaaaagaan cagactgcat 480
ggataaaaac gggaaaatag aaaaaaaaag gaaccttacc atttaatttt tgggttttaa 540
gcaaccnttt acttntcacn tttttatgga anaattngag aagntgggac ctttaccatt 600
ttccctttttt tttaacattt tntcggaatt nctttttattt ttttttttt 649

<210> 599
<211> 251
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 77, 91, 94, 109, 148, 152, 169, 170, 188, 204, 208, 239
<223> n = A,T,C or G

<400> 599
ctcatatagg cgaatggacc tccacgcggt ggcggccgcc cgggcaggta cttttttttt 60
tttttttttt attatanaaa acaagtgagg nccnaatgat cacaaaaana aggaataatt 120
ctaagtctca aaattggcaa gaaataangt cngatgctaa agtccaaann ttacgataat 180
gcacttgngc caggaccaat gccnatanag aacttgaaaa ttaagatgag acatttttna 240
agaacaagtg a 251

<210> 600
<211> 395

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 73, 123, 132, 139, 202, 204, 307, 351, 361
<223> n = A,T,C or G

<400> 600
aggtactttt tttttttttt tttttttttt cgagatgaag tcgctctgtc acccaggctg 60
gatggagtgc agnggtacaa tctcagctcg ctgcaacctc cgcctcccag gttcaagcga 120
ctntcctgcc tnagccttnt gagtagctgg gattacagac ccatgccaac acgccctcca 180
atttttgcat tttttttgt ananacagag tttcaccatg ttggcccagc tggtctcgaa 240
ctcatgacct tgtgatccgc ctgcctcggc ctcccaaaat gccgggatta caggtgtcag 300
ccaccgngcc tggccttatt ttcatagtaa tatgtaaaat atccataatg ngatcaactg 360
ngtatttata ataaatttta ataatatctc cgtaa 395

<210> 601
<211> 301
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 266, 279
<223> n = A,T,C or G

<400> 601
ggcgaattgg agctccccgc ggtggcggcc gaggtacttt tttttttttt tttttttttt 60
ttgggacgga atttcatcca ggctggagtg caatggcgca attttggctc actgcaacgt 120
ccgcctccca tgttcaagcg attctcctgc ctcagcctct cgggtagctg ggattacagg 180
catgagccac catgcccggc taaccttgta ttttcagtaa agatggggtt tctccatgtt 240
aagaattgag agagccactg aaaggngagt caggaagcnt catgatcaca gccgtgcctt 300
a 301

<210> 602
<211> 361
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 97, 154, 259, 269, 288, 308
<223> n = A,T,C or G

<400> 602
tctgtctccc aggctgtagt gcagtggcat gatcacgact cactgcaatc tctgcctcct 60
ggattcaagc aattctcctg cctcagcctc ctgagtngct ggattacagg cacacaccac 120
cacgcctggc taattttttg tatttttggt aganatgggg tttcaacatg ttggccaggc 180
tggtctcaaa ctcctgactt caagtgatct gcctgcctca gcctcccaaa atgctaaggt 240
tgcaggcgtg agccaccgnt cccagcctna aaatagtttc taatgatngg atacatccag 300
ttctccanat ccagcattct ggttacttaa caaagagata atagtttctt ttattgcttc 360
t 361

<210> 603
<211> 186
<212> DNA
<213> Homo sapiens

<400> 603
acctgtaatc ccagctactg gggaagctga ggcaggagac tcgctggaac ccaggaggcg 60
gaggttgcag tgagctgaga tctcaccact gcactccagc ctgggtgatg gagcaagact 120
ccatctccaa aagaaaaaaa aaagagaggc cccagttcag gctagctctg tctgtcttgt 180
ggggca 186

<210> 604
<211> 49
<212> DNA
<213> Homo sapiens

<400> 604
ttggagctcc acccgcggtg gcggccgagg tacttttttt cttttttt 49

<210> 605
<211> 101
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 33, 35, 44, 61, 62, 64, 65, 66, 67, 74, 77, 81, 83, 86, 91
<223> n = A,T,C or G

<400> 605
ccgggcaggt actttttttt tttttttttt tnnantaaag gggntttttt ttttttaaaa 60
nnannnnaaa aaanccnttt ncnttnaaaa naaaaaaaaa a 101

<210> 606
<211> 343
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 73, 123, 227, 237, 294, 300, 329, 337
<223> n = A,T,C or G

<400> 606
ccgcggtggc ggccgcccgg gcaggtactt tctctttttt tttttttttt ttttgagaga 60
tagagcctca ctntgtcacc caggctggag tgcaatggca tgatcttggc tcactgcaac 120
ctncgcctcc cgggttcaag ccattctcct gcctcagcct cccaagtagc tgggattaca 180
ggcacacgca accacgccca gctaattgtt tttgtatttt agtaganatg gggtttnacc 240
atgttgccca ggctggtctt aaattcctga gctcaggcaa tccacccgcc tcancctccn 300
aaagtcctag gattataggc gtgagccanc acacccngca aga 343

<210> 607
<211> 51
<212> DNA
<213> Homo sapiens

<400> 607
attggagctc cccgcggtgg cggccgaggt actttttttt tttttttttt t 51

<210> 608
<211> 45
<212> DNA
<213> Homo sapiens

<400> 608
ccgcggtggc ggccgaggta cttttttttt tttttttttt ttttt 45

<210> 609
<211> 134
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 75, 77, 98, 117, 122, 125, 132, 134
<223> n = A,T,C or G

<400> 609
cggccggagg ctgacgagag ccgggaggcg ttagcagaag gaagagaaaa accnaagact 60
aagccactac agcgncncac cgcggcgcgg cagtctgntt tataggagag ggcgcangcc 120
cncgngtacc tngn 134

<210> 610
<211> 121
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 24, 49, 85, 111
<223> n = A,T,C or G

<400> 610
cgcttggcgn taatcatggt catnagcttg tttcctgtgt ggaaattgnt atcccgctca 60
caatttccac acaaacaata ccgangcccc ggggagcata aagtgtaaaa ncctgggggt 120
g 121

<210> 611
<211> 729
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 66, 70, 71, 74, 77, 78, 80, 81, 89, 90, 91, 94, 96, 100,
103, 108, 110, 113, 120, 121, 122, 128, 132, 140, 142, 148,
149, 155, 156, 157, 158, 161, 174, 184, 185, 190, 193, 198,
199, 200, 201, 202, 203, 204, 205, 206, 219, 226, 227
<223> n = A,T,C or G

<221> misc_feature
<222> 228, 229, 231, 241, 247, 268, 272, 291, 292, 297, 301, 302,
307, 308, 311, 313, 319, 321, 323, 324, 333, 334, 336, 337,
338, 339, 341, 344, 346, 348, 349, 358, 365, 367, 372, 378,
379, 390, 399, 401, 408, 422, 424, 427, 434, 443, 445
<223> n = A,T,C or G

<221> misc_feature
<222> 449, 450, 460, 466, 470, 487, 490, 499, 513, 520, 534, 536,
538, 552, 554, 566, 570, 575, 585, 611, 612, 621, 623, 637,
639, 644, 645, 647, 651, 653, 666, 670, 674, 676, 692, 700,
702, 708, 713, 715, 716, 718, 727, 728

<223> n = A,T,C or G

<400> 611
aattggagct ccccgcggtg gcggccgccc gggcaggtac tttttttttt tttttttttt 60
tttttngggn nccnttnntn naaaaaccnn nggncnaaan ggnttttnan ggntttaaan 120
nnaaaaancc cnttttttttn cntttttnnc ccccnnnntt naaaaaaaaa aaantttta 180
aaanntttttn ggnaaaannn nnnnnntttt taaaaaaant tttttnnnnc nggccccccc 240
ncgggantttt tttttttttt ttttaaangg gnttttttttt taaaaaaaaa nnttttnccc 300
nnttttnntt nangggggnt nanncccccc ccnntnnnng naancntnnt ttcccccnaa 360
aattngnccc anaaaaannc cggggctttn gggggtttnt ngggggnaa aattttttttt 420
tngnaancca aaantttttt ttnanggtnn aaaggcccan tttttngggn aaaaaaaaac 480
ccccccntan aaaaaaaana atttttttaa aanaaaaaan ggccccctttt taantntnaa 540
aaaaaaaaaa anangggggaa aatttntttn ttttnggggg aaaangggggg ggtttttccc 600
cccaaatttt nnaaaaaggg ngngggaaaa acccccngnt taanntnggg ncntttttaa 660
aaaaanaggn gganccncccc cggggcgggg anaaattttn anttaaantt ttntnnancc 720
ccccccnnc 729

<210> 612
<211> 167
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 56, 59, 60, 62, 69, 71, 72
<223> n = A,T,C or G

<400> 612
catcttggtc cttttccacc attttcagcc cctccagggc tgggaggacc cggnangann 60
anactcttng nncctcggct gaagtggctg ggcatgacgc cgtttctctg acgtccccca 120
tagatcttgg tcatggagcc aaccccagcg ccaccccgga ggtacct 167

<210> 613
<211> 335
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 27, 33, 55, 115, 142, 228, 256, 264, 305
<223> n = A,T,C or G

<400> 613
tagtgagngg ttaaattgcg ccgcttnggc gtnaatcatg ggtccataag cctgnttttc 60
cttgttgtga aaaatttgtt tattcccgct cacaaattcc accaccaaca atacngaagc 120
ccggggaggc ataaaaagtg tnaaaaggcc ttgggggtgc ccttaatgga gtggagctaa 180
actcacattt aatttgcgtt ggcggctcac ttgcccggct tttcccangt tcggggaaac 240
cttgtccgtg gccaancttg ccanttaaat ggaaatcggc ccaacgccgc gggggggaaga 300
aggcnggttt tgcgtattgg ggcggctctt cccgc 335

<210> 614
<211> 212
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 28, 184
<223> n = A,T,C or G

<400> 614
gggcaggtac tacncaggcc ttggcatncc tggggttcac ctggctgact ggggtgtttg 60
aggcgggcag caatgtcttc cacggtctca ttgccttctg agatgatgcc cacacctttg 120
gcaatagctt tagctgtgat tggatggtct cctgtgacca tgatgacctt aattccagca 180
cttngacatt tgcccacggc atcaggaacg gc 212

<210> 615
<211> 222
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 94, 129, 176, 195, 200, 206
<223> n = A,T,C or G

<400> 615
cgtcgacctc gagggggggg gccccggtac ccagcttttt gttccccttt agtggagggg 60
tttaattgcg ccgctttggg ccgttaatca ttgngtcata gcatgttttc ctgtggtgga 120
aaatttgtnt atcccggcct tcacaaattt tcccaccacc aaaccattac cgaagncccg 180
ggggaaggcc attanaaagn tggtanaaag gcccttgggg gg 222

<210> 616
<211> 416
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 182, 291, 311, 350, 406
<223> n = A,T,C or G

<400> 616
ccgggcaggt accattcgca cacagagata tcgcctnctt tagcggtcat tgccttctga 60
cagcggtgga agtccaggta gttctgccag cagtttctag tctggttctg gttggggaag 120
cggctgtcaa aaggggcggt cttgtagttc ttgattttgg tctccatgtc ttccgccatg 180
gngctgaatc ctaaaggcac cccggattca acctgcagct caatgtggac cctcagcaaa 240
gacaccacag tcggacagga agcggaaact actaccagcc cggaagctga nagaggtggg 300
gactaccggg nagtctcccc gccgtacctc ggcccgctct agaaactagn gggatccccc 360
gggcttgcag gaaattcgat atcaaagctt attcggatac ccgtcngacc tcgagg 416

<210> 617
<211> 326
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 21, 24, 37, 78, 108, 139, 142, 144, 182, 186, 228, 239,
249, 253, 254, 276, 279, 320, 323
<223> n = A,T,C or G

<400> 617
taantgaggg gttaaattgc nccncttggg ccgtaantca atggtccata gctgttttcc 60
tggtgtggaa aaattgtnta ttcccgctta acaaatttcc cacaccancc attaccgaag 120
cccggggagc cattaaaang tngntaaaaa gcccctgggg ggtggccctt aaattgaagg 180
tngganggct taaacttcac cattttaaat ttgccgtttg gcgcctcnac ttgccccgnt 240
ttttttccna ttnngggggg aaaacccttg ttgcgntgnc ccaacctttg ccattttaaa 300

ttgaaaattc gggccccaan ccnccc 326

<210> 618
<211> 618
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 39, 43, 45, 46, 219, 298, 452, 454, 469, 498, 500, 520, 618
<223> n = A,T,C or G

<400> 618
ccgggcaggt acctcagtcc acatctcctt cacgttctnc agngnncatg ttgcagcgcc 60
tatcgaaggc cttcacgcgg cccaggagtt tcttattgtt gcggcagttg atgagcactt 120
gggtattgtt cttgactgac tgtgtgagca cagagagtgg accggtgtta aattcctcct 180
cctctcgctt ctgcaagctc ctctggggtc atctcactnt tgggcttgtt gaggaggctc 240
atgatggtca ctacgctctc cgttcactcc cgtttcctcc cccgcggtac ctcgggcncg 300
ctctaagaac ttaggtggga tcccccgggc ctgcaaggga attccgatat tcaagcttat 360
cgatacccgt cgacccttcg aggggggggg gccccgggta cccaagcctt ttgtttccct 420
tttaagtgga gggttaaatt gcgcgcttgg cngntaaatc atgggtcant agcctgtttc 480
cctgtgttga aatttggntn atcccgctca caatttccan cacaaacatt acgaagcccg 540
gggagcataa aaagtggtaa aaagcctggg ggggtgcctt aatggaggtt gaagcttaaa 600
cttcacaatt aaaatttn 618

<210> 619
<211> 363
<212> DNA
<213> Homo sapiens

<400> 619
ggagctcccc gcggtggcgg ccgcccgggc aggtacgcgg ggacattttc tcggccctgc 60
cagccccag gaggaaggtg ggtctgaatc tagcaccatg acggaactag agacagccat 120
gggcatgatc atagacgtct tttcccgata ttcgggcagc gagggcagca cgcagaccct 180
gaccaagggg gagctcaagg tgctgatgga gaaggagcta ccaggcttcc tgcagagtgg 240
aaaagacaag gatgccgtgg ataaattgct caaggacctg gacgccaatg gagatgccca 300
ggtggacttc agtgagttca tcgtgttcgt ggctgcaatc acgtctgcct gtcacaagta 360
cct 363

<210> 620
<211> 403
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 20, 22, 23, 31, 32, 33, 47, 54, 57, 70, 71, 72, 79, 82,
93, 94, 97, 104, 111, 112, 113, 115, 123, 137, 145, 146,
147, 148, 152, 153, 154, 155, 156, 162, 185, 186, 188, 193,
194, 195, 196, 197, 198, 199, 200, 209, 210, 213, 219
<223> n = A,T,C or G

<221> misc_feature
<222> 221, 222, 224, 227, 234, 239, 246, 247, 249, 250, 261, 263,
264, 266, 275, 286, 287, 289, 290, 293, 305, 310, 311, 313,
314, 315, 316, 322, 323, 324, 325, 326, 327, 328, 348, 349,
350, 359, 360, 376, 377, 378, 379, 380, 381, 382, 383
<223> n = A,T,C or G

<221> misc_feature
<222> 384, 385, 386, 387, 388, 389, 392
<223> n = A,T,C or G

<400> 620
ccctgggngg gggggcccn cnnccaagtt nnngttcctt ggggggnagg gtcnccncgc 60
cccttggccn nnaaaaaang gnttttcctt ttnngtnaaa aagngaaaaa nnngntaaaa 120
aanttcaaaa aaaaaanaaa aaaannnngg gnnnnnaaag anaaaaaaaa aacggggggg 180
ccccnnangg ggnnnnnnnn aacccccccnn ttnttttttnt nntngtntct tccnccctnt 240
tttttnngnn aaaaaaaaaa nanngncccc ccctnttttt tttttnntnn ttnccccccc 300
ccccncgggn nannnngggg gnnnnnnntt tttttggggg gtttttttnnn ttttttttnn 360
aaaaaaaaaa aaaaannnnn nnnnnnnnng gngggggggg ggg 403

<210> 621
<211> 169
<212> DNA
<213> Homo sapiens

<400> 621
aggtacgcgg gggtgtccgc acagaggtct gcaaggagag agagtgtctt cattctttcc 60
gccatcttga ttctttctca ctgaccaaga ctcagccgtg ggaaatatga gtgagcttgt 120
aagagcaaga tcccaatcct cagaaagagg aaatgaccaa gagtcttcc 169

<210> 622
<211> 179
<212> DNA
<213> Homo sapiens

<400> 622
aggtactccc cagcaaatat tctttgttgg cttgcttgac tagatgagct gctatagtag 60
tcaatcctgt tagacttgga ccattgtttg tctgaagaac tggaatctgt cgctcgccct 120
gagcactgta tttattcccc ttactcagtc ccagggactt ctccagtagc gacaactct 179

<210> 623
<211> 39
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 17, 34
<223> n = A,T,C or G

<400> 623
cgataccgnc ggacctncga gggggggcc ccgngtacc 39

<210> 624
<211> 142
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 87, 123, 129
<223> n = A,T,C or G

<400> 624
aggggttaat tgccgccgct tggcgtaaat catgggtcat tagcctngtt tcctgtgtga 60
aattggttat cccgctcacc aatttcncac acaaccatta cgaagcccgg ggaagccata 120

aangtgtana aagccctggg gg 142

<210> 625
<211> 191
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 25
<223> n = A,T,C or G

<400> 625
ggggcagctg gaggtgcctc agaangtgca ttctgcttcc tgcaggggct tgaaacacca 60
aggcactcca gggatcctgg agtcaaagca gcagccccgg ttgttgcact ccttgggggt 120
gacatggggg tagccgcagt ccaccctgtc cttggctggc acggcacact ggtttgcaga 180
caggcccacg t 191

<210> 626
<211> 170
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 74, 137
<223> n = A,T,C or G

<400> 626
tacccaagct tttgttccct tttagttgag nggttaaatt ggcgccgctt tgggcggtaa 60
tcatgggtca tagnttgttt cctggtgtga aattgttatc ccgctcacaa ttccacacca 120
acataacgaa gcccggngag cataaaagtt gtaaagcctg ggggtgccta 170

<210> 627
<211> 200
<212> DNA
<213> Homo sapiens

<400> 627
acttgcccca aatgtgcaac ataaatacag aagcgatgaa cagaagactc ataaccaata 60
ctggaacagg gccaactttg aacccaggtg aatcttctgt gtagaatcgc cacatccccc 120
cggtgcctgc cgaggttgtg cggcctgcac tccttgtccc acagctggca tttttcctct 180
gccggacagt ggatcccgcc 200

<210> 628
<211> 524
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 146, 234, 272, 380, 412, 417, 419, 423, 425, 432, 437, 467,
471, 478, 481, 482, 484, 499, 523
<223> n = A,T,C or G

<400> 628
tgttcccttt agtgaggggt taattgccgc gcttgggccg ttaatcatgg tcaataagcc 60
tgtttcctgt ggtgaaaatt gttatccgct cacaaattcc acaacaacat acgaagcccg 120
gggagcataa aaagtgtaaa agcctngggg tgccctaatg gagtggagcc taacttcaca 180

ttaaattgcg tttgcgcttc actgcccgct tttccaagtt cggggaaacc tgtncgtgcc 240
aagctgcatt aattgaaatc ggcccaacgc cncgggggag aaggcggttt tgcgtatttg 300
gggcgcctct tcccgcttcc ttcgcttcac ttggacttcg ctggcgcctc ggtccgttcc 360
ggcttgcagg cgagccggtn attaaagctt cacttcaaaa gggcggggaa antaacngnt 420
ttntncacaa gnaatcnaag gggggattaa accgccaggg aaaaaanaaa nattgttnaa 480
nncnaaaaaa ggcccagcna aaaagggccc atggaaaccc gtna 524

<210> 629
<211> 638
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 41, 443, 445, 449, 454, 456, 460, 461, 462, 466, 467,
470, 489, 490, 506, 507, 517, 558, 559, 581, 583, 599, 600,
623, 629, 631
<223> n = A,T,C or G

<400> 629
aggtacgtcc aaatgacgaa gtcactgcag tgcttgcagn ncaaacagaa ttgaaagaat 60
gcatggtggt taaaacttac ctcattagca gcatccctct acaaggtgca tttaactata 120
agtatactac ctgcctatgt gacgacaatc caaaaacctt ctactgggac ttttacacca 180
acagaactgt gcaaattgca gcccgtcgtt gatgttattc gggaattagg catctgccct 240
gatgatgctg ctgtaatccc catcaaaaac caaccggttt tatacttatt ggaaatccta 300
aaggtaggaa ataatgggaa gcccctgtct gttttgccca caccccaggg tggatttccc 360
tcttaaaaga aaaccttggg ctgggaattt ctggctgtgg gtcttattaa aataaaacct 420
tctttaacat ggcttccccg gangnaaana aaanancttn nnatanncan aattaaaaag 480
gtacccttnn gggcccggct tcttannaaa cctaggnggg gatccccccc ggggcctggc 540
aagggaaatt tccgaatnnt tcaaaagcct ttattccgat nanccggtcg gaaccctcnn 600
aagggggggg ggccccgggt tanccccanc ntttttgg 638

<210> 630
<211> 784
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 285, 357, 391, 438, 515, 522, 531, 535, 556, 563, 609, 625,
626, 643, 649, 653, 659, 666, 678, 712, 716, 721, 723, 734,
742, 759, 764, 771, 775
<223> n = A,T,C or G

<400> 630
ccgggcaggt accctttcca aggtgacctt caggggggatt aaccttccta gctcaagcaa 60
tgagctaaaa ggagccttat gcatgatctt cccacatatc aaaataacta aaaggcactg 120
agtttggcat ttttctgcct gctctgctaa gaccttttttt tttttttttac tttcattata 180
acatattata catgacatta tacaaaaatg attaaaatat attaaaacaa catcaacaat 240
ccagggatat tttttctatt aaaaactttt ttaaaaaata attgnatcct attataattc 300
aatttttaca tcctttttttc aaaggccttt tgttttttct aaaagggctt tggtttntcc 360
ttttttatta tttttttgtc cttttttatt nttttttgga ggacaagtct tggccttctg 420
ttccgccttc aagggctngg gagtggcaag ttgggccacc gaatccttca ggcttcaacc 480
tggcgaaacc cttcccttcc ctttcccagg gtttncaagg gnggaatttc ntttngtttc 540
aattcaagac ccctcncccg aanttaggcc ttgggggacc ttaccaaggg ccattggtgg 600
cccaccttnt tggcccccag ggccnnaaat tttttttggt ganccctcng ggncccgcnt 660
tcttangaaa accttaantg gggaatcccc cccccggggg ccttggcagg gnaaantttc 720
ngntttttcc agangccttt tntttggatt accccggtnc gganccccttc ngaanggggg 780
gggg 784

<210> 631
<211> 713
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 397, 435, 517, 554, 580, 591, 594, 647, 650, 652, 690, 694
<223> n = A,T,C or G

<400> 631
aggtactgat gcaacagttg ggtagccaat ctgcagacag acactggcaa cattgcggac 60
accctccagg aagcgagaat gcagagtttc ctctgtgata tcaagcactt cagggttgta 120
gatgctgcca ttgtcgaaca cctgctggat gaccagccca aaggagaagg gggagatgtt 180
gagcatgttc agcaagcgtg gcttcgctgg ctcccacttt gtctccagtc ttgacccgcg 240
tacctgcccg ggcggccgct ctagaactaa gtggatcccc ccgggcctgc aaggaaattc 300
ggatatcaaa gcttatcgga taccgtccga cctcgagggg gggggcccgg gttacccaag 360
ccttttttgtt ccctttttagt ggaggggtta attgcgncgc tttggcgtta atcaatgggt 420
caataggctg ttttnctgtg gtggaaattg gtttatcccg cttcacaaat ttcccaccac 480
caaacattac gaagccgggg aggccattaa aaagtgntaa aaagccctgg gggtgccctt 540
aatggaagtg gagnctaact tcaccattta aatttggcgn ttggcgcctt naantggccc 600
ccggcttttt tccaagttcg ggggaaaaac cttggtccgg tggcccnaan cnttggcatt 660
taaattggaa attcgggccc caaaacgccn cccngggggga agaagggccg ggt 713

<210> 632
<211> 232
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 18, 36, 104
<223> n = A,T,C or G

<400> 632
atagggcgaa ttggactnca ccgcggtggc ggccgncggg caggtacgcg gggggacttag 60
tgctcatgct cgctgcaggg gtcggaggtc agggcgagcg tctngcaggc cgtaggagga 120
agatggcggt ggagtcgcgc gttacccagg aggaaattaa gaaggagcca gagaaaccga 180
tcgaccgcga gaagacatgc ccactgttgc tacgggtctt caccaccaat aa 232

<210> 633
<211> 204
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 32, 65, 142, 145
<223> n = A,T,C or G

<400> 633
cgacctngag gggggggccc cggtacccca gnctttttgtt cccttttagt ggaggggtta 60
aattngcgcg ccttgggcgg taatcatggg tcataagctg ttttccctgt tgtggaaaaa 120
ttgttatccg ctcaccaatt tncancacaa acaatacgaa gccgggggag ccattaaaaa 180
gttgttaaaa ggcccttggg gggt 204

<210> 634
<211> 577

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 58, 74, 181, 231, 244, 284, 290, 320, 381, 386, 387, 399, 400, 401, 405, 407, 409, 411, 420, 421, 423, 424, 426, 428, 431, 437, 440, 450, 458, 463, 473, 490, 495, 497, 500, 503, 516, 527, 530, 543, 546, 547, 575
<223> n = A,T,C or G

<400> 634
tcatccctct acaaggtgca tttaactata antatactgc ctgcctatgt gacagacnat 60
ccaaaaacct tctnctggga cttttacacc aacagaactg tgcaaattgc agccgtcgtt 120
gatgttattc gggaattagg catctgccct gatgatgctt gctgtaaatc cccatcaaaa 180
ncaacccggt tttttatact atttgaaatc cctaaaggtt agaaataaat nggaaaagcc 240
ctgntctgtt tgcccaccac cccaggttgg atttttccct cctnaaaagn aaaaccttgg 300
ggcctgggga aattttcctn gcctggtagg gtccttatta aaaaaaataa aaaacctttt 360
cttttaaacc attggccaga ntatgnncat agtgaattnn ncgantntnc ntaaatattn 420
ntnntntngg nttcccnttn gggccccggn ttcttaanaa acntattttg ggnaatcccc 480
ccccgggtcn tggcnanggn aantttcgga tattcnaaag cctttantcn agattacccg 540
ggnccnnacc cctcataagg ggggggggc cccgngg 577

<210> 635
<211> 613
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 85, 204, 349, 370, 389, 420
<223> n = A,T,C or G

<400> 635
atatagggcg aattggactc caccgcggtg gcggccgccc gggcaggtac gcgggggcag 60
ttcggcggtc ccgcgggtct gtctnttgct tcaacagtgt ttggacggaa cagatccggg 120
gactctcttc cagcctccga ccgccctccg atttcctctc cgcttgcaac ctccgggacc 180
atcttctcgg ccatctcctg cttntgggac ctgccagcac cgtttttgtg gttagctcct 240
tcttgccaac caaccatgag ctcccagatt cgtcaggaat tattccaccc gacgtggagg 300
cagcccgtca acaagcctgg tcaatttgta ccttcgggcc gctcttagna actaagtgga 360
tcccccgggn ctgcagggaa attccgatnt caaagcttat ccgatacccg tccgaccttn 420
gagggggggg gccccggtac ccaagctttt tggttccctt tagtgagggt taaattgcgc 480
cgcttgggcg gtaaatcatg gtcataagct gtttcctgtg tgaaaaattg ttatcccgct 540
tcacaatttc ccacacaaac cattaccgag cccgggggaa gcattaaaag tgttaaaagc 600
cctgggggt ggc 613

<210> 636
<211> 447
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 318
<223> n = A,T,C or G

<400> 636
aggtactttt ccccacacca gcggtgccga ctaccacgac gcggtaatct ctgatcttcc 60
tgtggggctt gaaggcgcgg aggataagca gggcgggcag aagccgcaac cgcttcagca 120

gcttctgttc cttggagcca aagctggcgt tacccatcgt tgggattcgg aggggagata 180
cgtgcacaag ttctcccaca cttagctggc agcaggagac ccctttctcg gaggcacgaa 240
ccaagcagcc ttagaagaca aatgcgctgc tcggaagaga ctgccgcggc aaccaactgg 300
gacacccccc gcgtaccntg cccggggcgg cccgcttcta gaaacctagt gggatccccc 360
ggggctgcaa gggaatttcg atatcaaagc tttatcgata cccgtcgacc tccgaggggg 420
gggcccggtt accccagctt tttgttc 447

<210> 637
<211> 150
<212> DNA
<213> Homo sapiens

<400> 637
aggtacctgc aggcctccca cacctacctc tctctgggct tctatttcga ccgcgatgat 60
gtggctctgg aaggcgtgag ccacttcttc cgcgaactgg ccgaggagaa gcgcgagggc 120
tacgagcgtc tcctgaagat gcaaaaccag 150

<210> 638
<211> 273
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 195, 197, 206, 213, 223, 226, 242, 252
<223> n = A,T,C or G

<400> 638
gttaattgcg ccgcntggcc gtaatcatgg gtcataactt gtttccttgt gtgaaattgg 60
tatcccgctc accaatttcc acacaaacat accgaagccc ggggagcca ttaaaagtgt 120
aaaagcctgg gggtgcctaa tggagtgaag cctaacttcc acatttaaat ttgcgtttgc 180
cgcttcactt gcccncnttt tccaantccg ggnaaaaacc ctngtncgtg gcccaagctt 240
gnaatttaaa tngaaatccg ggcccaaccg ccc 273

<210> 639
<211> 613
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 228, 236, 425, 449, 460, 461, 471, 484, 490, 518, 562, 587
<223> n = A,T,C or G

<400> 639
ggtggcggga ggaaccgtta cgggaactga agttgcggat taagcctgat caagatgaca 60
acctcccaaa agcaccgaga cttcgtggca gagcccatgg gggagaagcc agtggggagc 120
ctggctggga ttggtgaagt cctgggcaag aagctggagg aaaggggttt tgacaaggcc 180
tatgttgtcc ttggccagtt tctggtgcta aagaaagatg aagacctntt ccgggnaatg 240
gctgaaagac acttgtggcc gccaacgcca agcagttccc ggggactgct tcggatgccc 300
tttcgtagag tggtgccgac gccttcttgt gatgctctct ggggaaagct ctcaatcccc 360
caagcccctc attccaggag tttgcagccc gagtagggga ctccctcccc ttgtcctctt 420
accgnaaggg aaaaaggatt tgctattgnt cgttaccctn nggcccgctc ntagaaacta 480
agtnggaatn ccccccgggg cctgcaaggg aaatttcnat tattcaaagc ctttattcgg 540
atacccgtcc gacccttcga angggggggg gcccgggtac ccccaanctt ttttggtttc 600
ccttttaagt gga 613

<210> 640
<211> 781

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 205, 390, 422, 471, 498, 556, 569, 604, 607, 620, 629,
641, 668, 673, 674, 680, 681, 691, 695, 708, 743, 749, 759,
761
<223> n = A,T,C or G

<400> 640
aggacgcggg gaggaagtgt cggcgccgcc actgtncggc cacagcctaa cgctcttcgc 60
tgtcgtttgt ggtctcgcgc agggcggccc cggttctggt gtttggcgtc ggaattaaac 120
aaccaccatg tcgagcaaaa aggcaaagac caagaccacc aagaagcgcc ctcagcgtgc 180
aacatccaat gtgtttgcca tgttngacca gtcacagatt caggaagttc aaagaggcct 240
tcaatatgat tgatcaggaa cagaagatgg cttcatcgac aagggaaaga tttgcatgga 300
tatgccttgc tttctctagg gggaaagaat cccactggat gcatacctttt ggatgccatg 360
atgaatgaag gccccagggg cccatcaatn ttcaccatgg ttcctggacc atgttttggg 420
tngaggaaag ttaaatgggc caccaagatt cctggaagaa tggtcattca ngaaaaccgc 480
cctttttgctt tgcttttnga ttgaaaagaa aagcctaacc aggggcaccc atttcaaggg 540
aaggatttac ccttanatta agaagcctng cttggaccaa cccattgggg gggggaatcc 600
gggnttntac caagaattgn agggaaaant gggattggag nctggttacc cttgccccgg 660
ggccgggncc cgnntcttan naaccttaag ngggnatccc ccccgggnct ttgcaaggga 720
aattccgatt attcaaaggc ctntattcng attacccgnc ngacccttcg aagggggggg 780
g 781

<210> 641
<211> 176
<212> DNA
<213> Homo sapiens

<400> 641
aggtactttg gcctctctgg gatagaagtt attcagcagg cacacaacag aggcagttcc 60
agatttcaac tgctcatcag atggcgggaa gatgaagaca gatggtgcag ccacagttcg 120
tttgatctcc accttggtcc ctccgccgaa agtgagcagt gagctaccat actgct 176

<210> 642
<211> 109
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 56
<223> n = A,T,C or G

<400> 642
gtctgggnat gccagtggcc ctgctggatg caccataaga tgagggagcc ctgggnagcc 60
tggcccaggg tttctgctgg gtaccctgcc cgggccggcc cgctctaga 109

<210> 643
<211> 340
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 72, 144, 152, 259, 263
<223> n = A,T,C or G

<400> 643
gaattcgata tcaaagctta tcgatacccg ttcgacctcn aggggggggg gccccggtac 60
ccaagctttt tngttccctt taagtgaggg gttaattgcg ccgccttggc cgtaatcaat 120
gggtcatagc ttgtttcctg tgtngaaatt gnttatccgc tcacaattcc caccacaaca 180
taccgagccc ggggagcata aaagtgtaaa gccctggggg tgcctaatga agtggagctt 240
aactcacatt aatttgcgnt gcngctcact tgcccgcttt tccagtcggg gaaaacctgt 300
tcgtgcccag cctggcatta atgaatcggg cccaaccccc 340

<210> 644
<211> 183
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 644
nccgggcagg tactttggcc tctctgggat agaagttatt cagcaggcac acaacagagg 60
cagttccaga tttcaactgc tcatcagatg gcgggaagat gaagacagat ggtgcagcca 120
cagttcgttt gatttccacc ttggtccctt ggccgaacgt ccgtagagtt ctatagtatt 180
gtt 183

<210> 645
<211> 185
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 74, 142, 168, 169, 171
<223> n = A,T,C or G

<400> 645
tcggtcaggg accccgggat gcccgggtag aagcccagta aaatgaagca gttttaggag 60
gctgttcctg gttntctgct gggtaccttc ggccgctcta gaactaagtg gatccccccgg 120
ggctggcaag ggaaattcga tnttcaaagc cttatcggat acccgttnna nccttcgagg 180
ggggg 185

<210> 646
<211> 246
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 65, 231, 239
<223> n = A,T,C or G

<400> 646
ccgggcaggt accaggctaa gtagttgctg ctatcactct gactggccct gcaggagagg 60
gtggntcttt cccctggaga caaagacagg gtgcctggag actgcgtcaa cacaatttct 120
ccgatggtat ctgggagcca gagtagcagg aggaagagaa gctgcgctgg ggtttccatg 180
gttccctctg ggtcctaact gagcagctct tctctcccgc gtacctcggc ncgctctana 240
actagt 246

<210> 647

<211> 275
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 31, 62, 70, 174, 205, 227, 245
<223> n = A,T,C or G

<400> 647
taantgccgc gctttgggcg ttaatcatgg ncattagctg ttttcctgtg gtgaaaattg 60
gntattccgn ttcacaattt ccacacaaac attaccgaag ccgggggagc cataaaaggt 120
tgtaaaaagc cctggggggt ggccctaaat ggaaggtgga agccttaaac ttcnaccatt 180
taaattggcc gtttgcggcc tcacntggcc cccgcctttt tccaagnttc ctgggaaaaa 240
ccttnttcgg tgccccagcc ttgcatttta aaatg 275

<210> 648
<211> 599
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 57, 59, 65, 336, 350, 434, 445, 468, 507, 544, 580
<223> n = A,T,C or G

<400> 648
aggtacttgt tgttgctttg tttggagggt gtggtggtct ccactcccgc cttgacngna 60
gctgntatct gccttccagg ccactgtcac ggctcccggg tagaagtcac ttatgagaca 120
caccagtgtg gccttgttgg cttgaagctc ctcagaggag ggcgggaaca gagtgaccga 180
gggggcagcc ttgggctgac ctaggacggt cagcttggtc cctccgccga acactatggc 240
actgaggctg taagtcccat gttgaacagt aattaatcag cctcgtcctc agggctggag 300
gccccgaaat aagtcagggg aggctgtggg tcccanactt tttgagccan gaggaagcgg 360
gtcaggggat ccctgagggg caagagaatt ttccaaacat cacagttttg gggagccgcc 420
cgtgaggaaa atcntgttgg taccntgccc cgggccggcc cgctctanga actaagtggg 480
atcccccggg ccttgcaggg aatttcngat atcaagcttt atcggattac ccgttcgacc 540
ctcnaagggg ggggccccgg ttaccccaag cttttggttn cccttttaag tggaggggt 599

<210> 649
<211> 243
<212> DNA
<213> Homo sapiens

<400> 649
aggtacaaca agcgggaaac gatagaggct tggactcaac aagtcgccac tgagaatcca 60
gccctcatct ctcgcagtgt tatcggaacc acatttgagg gacgcgctat ttacctcctg 120
aaggttggca aagctggaca aaataagcct gccattttca tggactgtgg tttccatgcc 180
agagagtgga tttctcctgc attctgccag tggtttgtaa gagaggctgt tcgtacctgc 240
ccg 243

<210> 650
<211> 403
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 313, 344, 355
<223> n = A,T,C or G

<400> 650
gatcccccgg gcttgcaggg aattcgatta tcaagcttta tcgataccgt ccgaccctcg 60
agggggggcc ccggtaccca gctttttgtt ccctttagt tgaggggtta aattgccgcg 120
cttgggcgtt aatcatgggt cataagctgt tttccctgtg tggaaaattt gtttatcccg 180
ctcacaaatt tcccaccaca acaataacga gcccggggag ccattaaaaa gttggtaaaa 240
agccctgggg ggtggccctt aaatgaagtg gaggcctaaa cttccacaat taaatttgcc 300
gtttggccgc ctncaacttg gcccccggct tttttcccaa gtancggggg aaaancccct 360
tggttccgtt ggcccaaggc cttggcaatt taaaattgga aaa 403

<210> 651
<211> 745
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 64, 303, 319, 409, 416, 419, 454, 475, 480, 497, 542, 627,
639, 670, 685, 688, 695, 698, 722, 724, 733
<223> n = A,T,C or G

<400> 651
acgcgggaaa tatattatat atggatgtgt gtgtgtgcgt gcgcgtgagt gtgtgagcgc 60
ttcngcagcc tcggcctagg tcacgttggc cctcaaagcg agccgttgaa ttggaaactg 120
cttctagaaa ctctggctca gcctgtctcg ggctgaccct tttctgatcg tctcggcccc 180
tctgattgtt cccgatggtc tctctccctc tgtcttttct cctccgcctg tgtccatctt 240
gaccgttttt cacttgtctc ccttttctgg acctgtccct gccaatggct ccagcttgtc 300
gtnctgactc ttggggttnc gtttgggggg acatggaaga atttttttatt ttttttggtg 360
gaagttgaag actggaaggg gatcggtagg aatttttttt acaaaattnt gtgaantant 420
tttggaacaa aatttcttgg gggttgcccg aagntggttg aagaaggttg gttgnaagcn 480
aagggggcct tttggcnttc cctgggccca aacccaacca aattttccaa attggaaaat 540
tncccccgga accccccccc cttaaccccc caattggcct tggtaacccc ttggcccccc 600
gggggccggg gccccgcctt cttaggnaaa cctaaggtng ggaattcccc cccccggggc 660
cttggcaagn ggaaaatttc cgaantantc caaangcntt taattcgaat aaccccggtc 720
cngnaaccct tcnggagggg ggggg 745

<210> 652
<211> 745
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 320, 325, 339, 358, 374, 407, 410, 412, 475, 483, 494, 503,
505, 512, 518, 526, 528, 541, 566, 588, 603, 617, 643, 667,
684, 686, 701, 706, 714, 721
<223> n = A,T,C or G

<400> 652
ccgggcaggt acgcggggcc ctctctgtct tctctgcagt gggagcagct ctcctgccac 60
ggctcctcac cccctgaaaa tgttcgcctg ctccaagttt gtctccactc cctccttggt 120
caagagcacc tcacagctgc tgagccgtcc gctatctgca gtggtgctga aacgaccgga 180
gatactgaca gatgagagcc tcagcagctt ggcagtctca tgtcccctta cctcacttgt 240
ctctagcccg cagctttcaa accagcgcca tttcaaggga catcgacaca gcagccaagt 300
tcattggagc tggggcttgn cacanttggg gtggctggnt cttgggctgg gaattggnac 360
tggtgttttg gaancccaat caattgggta tgcccaggaa ccttttnttn ancaacagct 420
ttttttctaa cgccaatttt gggcttttgc cctttcggaa gggccatggg ggctnttttt 480
gtnttgaagg ggangccctt ttntnatcct tnttttgncc attgtngnaa aggaaacccg 540
nttttcaacc cttcccaata aagttnttcc cccgtttttg ggttgggncc ccccgggggg 600

gtnccctttt tccttanaac cctcccccaa agccaaaccc ttngggggaa acctggggtt 660
gggcttnaag ggtttttggc cccnanaaaa aaaaccaaaa naaaantacc tgtnttttaa 720
ntggggaaaa aaaaaaaaaa aaaaa 745

<210> 653
<211> 737
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 45, 46, 68, 352, 442, 536, 581, 610, 681, 696, 718
<223> n = A,T,C or G

<400> 653
aggtacagaa ctttacagaa tagaggcaat actttagctt aagnnngtct gctgaccaga 60
gaatggantt ctgcgtggac tcaaggaaca aaaggaaact aggcagggaa ggggaagaaa 120
agtgcccatc tgaatcaaac ttcagctgcc atcagggcac atcttgtggt ggtcacagat 180
tgtaggctgt tttttggaag attcgggttc agcacaggat tccatttgtc tacttggcta 240
cacccctggc tgaggtgccc atgaggtcca atgtcactca aagttcctgg gcccagctca 300
aaactccccg caagcaaaaa gagtccccaa aatttagtat caaagttcct cncgggaagg 360
tcattcccta tcagttggca aaagcgggta agaccgcccc gaaaagccca atctccccac 420
cgttgtcccg gtatttcggg gnagtttcat ttagcccgaa gcccagccag gcgcctcacc 480
ggggaccagt gcctggaaag cccataagtg ggaaaagcct tttccgccat tggggncctt 540
cgggtgggga gggacccccc ggcgttaccc ttgccccggg nccgggggccg cttcttaaga 600
aacttaagtn ggaatccccc ccggggcctt gcaagggaaa ttccgaatat tcaaaggcct 660
ttatttccgg attacccggt ncgaaccctt ttgaangggg ggggggcccc cgggttancc 720
ccagcctttt ttggttt 737

<210> 654
<211> 705
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 73, 251, 376, 406, 480, 688
<223> n = A,T,C or G

<400> 654
aggtacgcgg ggatactttc tgagagtcct ggacctcctg tgcaagaaca tgaaacatct 60
gaggttcttc ctnctcctgg tggcagctcc cagatgggtc ctgtcccagg tgcagctgca 120
ggagtcgggc ccaggactgg tgaagccttc acagaccctg tccctgacct gcactgtctc 180
tggtggctcc atcagcagtg gtagtttctt ctggaccttg gatccggcag cccgccggga 240
aagggactgg nagtggattg ggcgaaatcc ttaccagtgg ggaagcaccg actacaaccc 300
cttcccttca aagaagtccg agtctccatt gtcaagttgg gaagaaagtc ccaaagaacc 360
aagttctccc ttgaangttt gaagtttctc ttgacccgcc cgtcangacc gccggcccgc 420
ttcttagaaa ctaagttggg atcccccggg cctggcaggg aattcgatat tcaagcttan 480
tcgaataccc gttcgtaccc tcggaagggg gggggcccgg ttaccccagc ttttttgttc 540
ccttttagtg gaggggttaa attggcgccg ccttgggccg taatcatggg tcattaagct 600
ggttttcctg tggtggaaaa tttggtttat cccgctcaac aaatttccca caacaaacat 660
taccgaagcc cggggaagcc attaaaangt gttaaaaagc ccctg 705

<210> 655
<211> 127
<212> DNA
<213> Homo sapiens

<400> 655

aggtactgca tctttaatct cttgctgggc acgccgccca gattggccga ggcctcgctc 60
cggaccatcg cagacgccgc cactaggaga agcagcagaa gcctcatctt aaatgagcca 120
gccactt 127

<210> 656
<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 185, 254, 255, 273, 289
<223> n = A,T,C or G

<400> 656
cggtacccag ccttttgttc cctttaagtg aagggttaat tgccgccgct tggcgtaaat 60
caatggtcat aagctgtttc ctggtgtgaa aaattgttat tcccgcttca caaattccac 120
acaaaccatt accgaggccc gggggagcca ataaaaggtg gttaaaagcc cttggggggt 180
ggccntaaat tggaagtgga aggcctaaac ttcaccaatt taaaatttgg cggttttgcc 240
ggcttcaact tggnncccgc ctttttccca agntcggggg aaaaaaccnt tggtccggtg 300
gcccaagcct tggcaattta aaatggaaaa ttcg 334

<210> 657
<211> 823
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 353, 376, 464, 481, 530, 553, 559, 593, 673, 697, 724, 732,
743, 761, 765, 767, 769, 772, 779, 782, 802, 804, 805
<223> n = A,T,C or G

<400> 657
aggtcggccg aggtacgcgg gaactctgtc aacgaaggct tgaaccaacc tacggacgac 60
tcgtgctttg acccctacac agtttcccat tatgccgttg gagatgagtg ggaacgaatg 120
tctgaatcag gctttaaact gttgtgccag tgcttaggct ttggaagtgg tcatttcaga 180
tgtgattcat ctagatggtg ccatgacaat ggtgtgaact acaagattgg agagaagttg 240
ggacccgtca gggagaaaat ggccagatga tgaagctgca catgtcttgg gaaccgggaa 300
aaggagaaat tcaaggtgtg accctcatgg aggcaaacgt gttaccgatg atnggggaaa 360
gaccattacc acgtangaag aacagttggc aggaagggaa tatctcggtg ccatttgctc 420
ctgcacatgc ttttgggagg ccaagccggg ggcttggccg cttntgaaca aacttgccgc 480
nagaacctgg ggggtgaacc ccagtcccga aaggcactac tgggccaagn cctaccagcc 540
cagtattctc agnagattnc catccagaag aaccaaaacc ccttaatggt ttnatttggc 600
ccccaaattt ggaggtgcct tttcattggc ccttttaaga aatgttaccc cttgccccccg 660
gggccggggc ccncttctta agaaacttag gtggggnatc cccccccggg ggcctggcaa 720
gggnaatttc cngaatttcc aangccttta ttccgaatta nccgntncna anccttccna 780
angggggggg gggcccccgg gntnnccccc aacttttttt tgg 823

<210> 658
<211> 651
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 514, 524, 565, 599, 608, 615, 620, 636
<223> n = A,T,C or G

<400> 658
aggtacttta ggagacccag gcgggcagat tgcctgaggt caggagtttg agaccggcct 60
ggctaacatg gtgaaaccct gtctctacta aaaatacaaa aattagccgg gcatggtggc 120
tcacgcctgt agtcccaact gcttgggagg ttgaggcaag agaatcgctt gaacccagga 180
ggtgggggtt gcagtgagcc gagatcgcgc cactgcactc cagcatgggc gacagagcaa 240
gactccatct caaaataaag aaagaaagaa acaaagaaaa gaaaagctta tattgaactt 300
ctctaaaaaa agaaaaaaaa gaaagcctga tgcacacaaa tctaaatttg gcaagtcgat 360
caattaaagg atatttattt gcatcacaaa ataattcttt actcccccca aaaatcaata 420
aaaagttcaa atagcaactt ttcctaatgt gtttaaaatg taatcaccaa atacatgtgt 480
ccccaacttt ctttccagtt ataattctat tggngtaaag ggangttacc tggaagtgag 540
gcaataaaga agagttgagc ttcanacctg cctggagaga gccgtggttc ttttttana 600
gttttgangg aaatnggttn gggggcacca aaattntttt aaatcttttt t 651

<210> 659
<211> 743
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 354, 453, 478, 479, 536, 591, 621, 623, 624, 634, 718
<223> n = A,T,C or G

<400> 659
acccaggatc tggaaggaaa gggccaagct gggctgtggc atccactgga ccctagagtc 60
ttcattgggc aggggcctca gaaatccaca aaagactccc cagtggctgt tcctctttcc 120
caacgaggct tggacccccct tccagccatt tgggaactca agcaggaagg aaggttcctt 180
aggacaggtt cctggcatgg caggttcccc tgggaagtgg tcggagggcc ctcccacctt 240
cttgatgcca gcaagaagtc aagggccttt cctgcttccc tgaggacaac aatcagggct 300
ttcttgcgga cttgggcctt ctggttcaca ctggcaacgt ttcagaaccc caangtaccc 360
tcggccggtt cttagaacct agttgggatc cccccgggcc tgcaaggaat ttccgatatt 420
caaggcttta ttcggatacc cgtccgaacc tcnagggggg gggccccggt taccccannc 480
tttttggttc cctttaagtg gaggggttta atttgccgcc gccttggccg taaatnaatt 540
gggtcaatta agcttgtttt ccctgtggtg gaaaaattgt ttaattcccg nttcacaaat 600
tttcacaaca aaccattacc nannccccggg gaanccatta aaagtggtaa aaagcccttg 660
ggggttgccc ctaaatggaa gttgaagcct aaacttcaca attaaatttg ccgtttgncg 720
cctcaacttg ccccgctttt tca 743

<210> 660
<211> 736
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 106, 171, 175, 176, 186, 189, 190, 191, 197, 202, 205, 206,
221, 267, 273, 281, 283, 290, 291, 296, 297, 300, 301, 304,
305, 306, 314, 327, 328, 332, 345, 348, 353, 359, 514, 551,
560, 601, 606, 611, 634, 636, 652, 655, 662, 667, 681
<223> n = A,T,C or G

<400> 660
ccgcggtggc ggccgcccgg gcaggtacag aatggcggtc ctgctgactt ggctgggcta 60
gaggatgagg atgtcatcat tgaagtgaat ggggtgaatg tgctanatga accctatgag 120
aaggtggtgg atagaatcca gagcagtggg aagaatgtca cactcctagt ntgcnnaaag 180
aacgcntann nttattncca anctnngaaa atccctattg nttcctccct ggctgatcca 240
cttgacaccc ctccagattc taaagcnatg tantagcgtt ntnaatcccn nccatnnctn 300
nggnnnggcc caangaaccg cggcccnnca gntaccttct tggcncgntc tanaactang 360
tggggatccc cccgggcctg caagggaatt tcgatatcaa gcttaatccg atacccgtcg 420

gaccctcgag ggggggggc ccgggtaccc caagcttttt tgttcccttt agtggagggg 480
tttaatttgc gccgcttggc gtaaatccat gggncaataa gctgttttcc ttgtggtgaa 540
aaatttggtt nttcccgctn caccaaattt cccaccaacc aaaccattac cgaccccgg 600
ngggantcca nttaaaaggt ggtaaaaaac cccntngggg gggtggcccc tnaantggaa 660
gntggangcc ttaaacttca ncattttaaa atttggccgt ttgccgcttc acctggcccc 720
cgctttttcc aagttc 736

<210> 661
<211> 480
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 443, 451, 452, 453, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472
<223> n = A,T,C or G

<400> 661
tccaccgcgg tggcggccgc ccgggcaggt acgcggggag acatacactg gagtgatgca 60
actacaaacc aaggaacacc aaggaccacc agcaatgact agagctagga gagaggcatg 120
gaatagattc tcccacagag ctgccagaag gaaccagcat tgccaacatc ttatttcaga 180
cttctagcct ccagaattgt gagagaataa atttttgttg ttttcagcct tccaatttgt 240
gataatttgc tatggtagcc ctaggaaaat aatacatctg gattccagct ttccactcac 300
atcatcgttt tctccatcct tcccatgtct acatattgtt gttccagatt aaagatatct 360
tgatgtcaca ggtgctggga attgtttttg taactctttc tcttggtggc tctgtggtga 420
ttgactccca aggacaaaag gangcttacc nnnaaaannn nnnnnnnnnn nngtacctcg 480

<210> 662
<211> 493
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 386, 420, 422, 447
<223> n = A,T,C or G

<400> 662
aggtactctc caagctgctc aaaaagctca caattttgtt tgattaaatt ctgaggctct 60
tccacaagag gtttaaattc atcgaacact ttggcatagc attcatgagg atctgcagcg 120
gcgcagcact tctctagagt ggtttcatat gtcttggcaa gtctcagcag cagcacgaca 180
gagtaatcag gatgccttct tgcatattca tacaaaaaca tgcccaggaa gacatccttt 240
gcctcagcat agtttttgca aacatcctta ctttcaacaa aatcagcagc ctaatggaag 300
gcaagtcagc agggcatctc atcattttcc acttcggcaa tgcccctggc gtacctgccc 360
cgggcggccc gctctagaac taagtnggga tccccccgg gctgccaggg aaatttcgan 420
tntcaaagcc ttattccgat tcccgtncga ccctcgaggg ggggggggcc cccgggtacc 480
cccaactttt ttt 493

<210> 663
<211> 493
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 386, 420, 422, 447
<223> n = A,T,C or G

<400> 663
aggtactctc caagctgctc aaaaagctca caattttgtt tgattaaatt ctgaggctct 60
tccacaagag gtttaaattc atcgaacact ttggcatagc attcatgagg atctgcagcg 120
gcgcagcact tctctagagt ggtttcatat gtcttggcaa gtctcagcag cagcacgaca 180
gagtaatcag gatgccttct tgcatattca tacaaaaaca tgcccaggaa gacatccttt 240
gcctcagcat agtttttgca aacatcctta ctttcaacaa aatcagcagc ctaatggaag 300
gcaagtcagc agggcatctc atcattttcc acttcggcaa tgcccctggc gtacctgccc 360
cgggcggccc gctctagaac taagtnggga tcccccccgg gctgccaggg aaatttcgan 420
tntcaaagcc ttattccgat tcccgtncga ccctcgaggg gggggggcc cccgggtacc 480
cccaactttt ttt 493

<210> 664
<211> 467
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 203, 238, 345, 367, 386, 401, 412, 424, 444, 445, 450, 453
<223> n = A,T,C or G

<400> 664
ccgggcaggt acctgggagt ggccttctgt gcctgccact gtgcttccca cattgcttag 60
tcacacacat aactgggagg tgctgtgttc ccagtttttg tgagtgcatt gagcccctag 120
tggttctacc ccttagcaat aactgtccct ggaacaggtg tcatcactgt agaaatgcag 180
gttacagccc ttgcagaaca canagattgg gcccatgaat tacacctgag ctgccctnct 240
tttgttaatt gatgagtttg atcaagatca ggaaggtggt gatgcaaaac cggatggcct 300
tagacatagt cacagctgct caaggtggca cctgtgccct tgtanggaca gaagtgttgt 360
acctttngcc gctctaaaaa ctagtngatc cccggggct ngcagggaat tngataattc 420
aaanctttat tcgaataccc gttnnacccn tcngaggggg gggggcc 467

<210> 665
<211> 193
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22
<223> n = A,T,C or G

<400> 665
cgaacgcagc catagcgcgg anaagatggc aacagttacc cccgcgtacc tgcccgggcg 60
gccgtggctg cccagacgta tttggcgtcg cagtagccga caatggcggc ctcccggcag 120
cagccatcgc acatcaggtt atccacgtag ctctgccaac cggccatctt cgagcccccc 180
cgcgtacctc ggc 193

<210> 666
<211> 283
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23, 99, 102, 131, 209, 210, 248
<223> n = A,T,C or G

<400> 666

attcatcatg gatgctatga gtnagccagg gggcaggctt gccatgggtt ttgtgacacc 60
cccatccaaa gctcaccatg ttgcatcccg cccattgtnt gngggacccc aagtttctag 120
ccatgtccag ntcttcacaa aagctggatg cacatgccaa ggcaagccat ccacagctgc 180
tgctggaagg gtggtgcaga tctaacagnn ggagacattg gccacctcag cataggtgtg 240
agcccagncc acaatgttgt tggagcatgc caacctgtgg ctg 283

<210> 667
<211> 161
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 85, 93
<223> n = A,T,C or G

<400> 667
ccgggcaggt acgcgggcgg gctgaataaa gccgtgtctc atctacctgc tgtntcccaa 60
gtgttcttcc agctccctgc ccctnatcaa ccnactctcc tcagacctca gctggggctt 120
gaacctgata attggtgtag tcatcaggat gagctgtacc t 161

<210> 668
<211> 497
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 49, 405, 458, 487
<223> n = A,T,C or G

<400> 668
gcggccgagg tactctccaa gctgctcaaa aagctaacaa ttttgtttng attaaattct 60
gaggctcttc cacaagaggt ttaaattcat cgaacacttt ggcatagcat tcatgaggat 120
ctgcagcggc acagcacttc tctagagtgg tttcatatgt cttggcaagt ctcagcagca 180
gcacgacaga gtaatcagga tgccttcttg catattcata caaaaacatg cccaggaaga 240
catcctttgc ctcagcatag tttttgcaaa catccttact ttcaacaaaa atcaagcagc 300
taatgaaggc aagtcaagca aggccattct cggcatttcc acttcggcca atgccccgcg 360
tacctgcccc gggccggccc gctctagaac taagtgggat ccccncgggg cttgcaggga 420
aattcgatat tcaaggctta ttcgataccc gttcgacnct ctaggggggg ggccccggtt 480
accccancct tttgggt 497

<210> 669
<211> 683
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 269, 310, 470, 514, 599, 623, 631, 634, 648
<223> n = A,T,C or G

<400> 669
tggagctcca ccgnggtggc ggccgaggtc tctccaagct gctcaaaaag ctcacaattt 60
tgtttgatta aattctgagg ctcttccaca agaggtttaa attcatcgaa cactttggca 120
tagcattcat gaggatctgc agcggcacag cacttctcta gagtggtttc atatgtcttg 180
gcaagtctca gcagcagcac gacagagtaa tcaggatgcc ttcttgcata ttcatacaaa 240
aacatgccca ggaagacatc ctttgcctna gcatagtttt tgcaaacatc cttactttca 300
acaaaatcan gcagctaatg aaggcaagtc agccaggcat ctcatcattt tccacttcgg 360

caatgcaagt ggggattttt ccaacaagag gtttttcaca gcattccttt cagtttactt 420
ggagatcgaa atcttggatt tttcacagat tattaccttg ggcaagggtn ccgcctataa 480
agtaagttgg tgggaaaatt ggttcaacac cganattgga catttggcta accactttct 540
tcccttcagg acccttttat ttaaagtttg ggccaggaaa ccattatttt ccatttggna 600
atttcccccc ccggcggtaa ccnttggccc ncgngggccg gggcccgnct tcttaaggaa 660
acctaagggt ggggaattcc ccc 683

<210> 670
<211> 498
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 385, 486, 490
<223> n = A,T,C or G

<400> 670
aggtacaaat tgaccaggct gttgacggct gcctccacgt cggtggaata attctgacga 60
atctgggagc tcatggttgg ttggcaagaa ggagctaacc acaaaaacgg tgccggcagg 120
tcccagaagc aggagatggc cgagaagatg gtcccggagg ttgcaagcgg agaggaaatc 180
ggagggcggt cggaggctgg aagagagtcc ccggatctgt tccgtccaaa cacttgttga 240
agcaaggaga caggaccccg cgggaccgcc gaaacttgcc cccgcgttac cctgcccggg 300
gccggcacgc tcttaagaaa cctagtggga tccccccggg cctgcaaggg aattcgatat 360
tcaagcttta ttccgatacc cgtcngacct tctgaggggg ggggccccgg gttaccccaa 420
gccttttgt tccctttta gtggaagggg tttaaatttg gcgccgcctt tggcggtaaa 480
tcaatngggn cattaagc 498

<210> 671
<211> 469
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 359, 388, 390, 439, 442, 455, 457
<223> n = A,T,C or G

<400> 671
aggtacgcgg gggcagttcg gcggtcccgc gggtctgtct cttgcttcaa cagtgtttgg 60
acggaacaga tccggggact ctcttccagc ctccgaccgc cctccgattt cctctccgct 120
tgcaacctcc gggaccatct tctcggccat ctcctgcttc tgggacctgc cagcaccgta 180
ttttgtggtt agctccttct tgccaaccaa ccatgagctc ccagattcgt caggaattat 240
tccaccgacg tggaggcagc tcgtcaaaca gcctggtcaa tttgtacctt gcccgggggcg 300
gccgctctta gaacctagtg ggattccccc ggggccttgc agggaaattc gatattcana 360
gcttaatccg attaccgtcg taccctangn agggggggg ggccccggtt accccaagct 420
ttttggtttc ccttttant tngaggggt taaantntgg cggccgcct 469

<210> 672
<211> 681
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 357, 423, 515, 569, 578, 581, 630, 661, 665, 670
<223> n = A,T,C or G

<400> 672

agggcgaatt ggactccacc gcggtggcgg ccgcccgggc aggtacgcgg gtgcccgact 60
catcacagaa accaattgcc agctgtgggt ggtggaggag cagagtgtta gccaaatcga 120
tggtgacttt gaagactaca agcgggaggt gttggaggcc ctgggtgaag tcatggtcag 180
ccggccccga gagtgaagct ttccttccca gaagtctccc gagagacata tttgtgtggc 240
ctagaagtcc tctgtggtct cccctcctct ggaagactgc ctctggcctg cagcttgacc 300
tggcaaccat tcaggcacat gaaaggtgga gtgtgggcct tggatgtgga cccgggnatc 360
ccactcttga ttgcatccca tttctcttga aaaggacttt gttttgtttc tgctttcttc 420
ttnatataaa ctggagcctg ggcccttatc ccttttgggc atcccccctt aaacaaaaca 480
agagggtgga ccacccttaa ttggtgaggg ttccnatccc agcccaagtt taatgtgggc 540
cctattgttc ttcaaggact cttcaatcna cttcaagnaa ngccctgccc tctggatttt 600
aacccettac aagcttttca agggccccan gcttggcccc ccccaagatc tttttggggt 660
ngggngcctn gttccttttt c 681

<210> 673
<211> 595
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 317, 541, 553, 561, 572
<223> n = A,T,C or G

<400> 673
ttggagctcc acccgcggtg gnggccgccc gggcaggtac tgtgaggttt gatttgtgtg 60
acagaatctg gcttccagaa gtcaatctgg gtcgtgctgg tcaactcgcg gattatgtta 120
atgtgatttt catcttcaac gttaacacgg aacaccttct cgccttcaaa gtgctcacca 180
ccatgatgag cagatgccag ggccacagtc accagaacca agagtgccaa cattgtgtct 240
gaccaggtct agtggggtaa ggtctcatct cccgcgtacc tcggccgctc taagaaccta 300
gttggatccc ccggggnctg cagggaattt ccgatatcaa gcctttatcg attacccggt 360
cggaccttcg gagggggggg ggccccggta cccaagcctt tttgtttccc tttaagtgga 420
agggtttaaa ttggcgccgc ttgggccgtt aatcattggg tccattaggc tggtttcctg 480
gtggtggaaa atttgttaat tccgcttcac caaatttttc caccaaccaa acaattaccg 540
naggccccgg ggnaagccca nttaaaaagt gntaaaaagc cccttggggg ggtgg 595

<210> 674
<211> 233
<212> DNA
<213> Homo sapiens

<400> 674
ccgggcaggt accacgatgt atagagcaac actggggtaa ggtcactgtg ggatggttgc 60
ctgctgagac ctgtgcaaac gtaacacatg ccaccatgcc aaggatgtgg ccggaacaag 120
cagccctacc aaggctgggc ccccatggac tttgtgcctg ctgggagttt ataggtctgt 180
ggggacatag gatggccata tcttgccagc caactagact ggacattgta cct 233

<210> 675
<211> 841
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 23, 27, 37, 39, 41, 44, 45, 46, 50, 52, 62, 63, 80, 86,
103, 112, 114, 117, 126, 127, 133, 147, 233, 257, 295, 323,
325, 421, 432, 438, 445, 529, 578, 602, 617, 624, 642, 652,
682, 684, 705, 715, 760, 775, 783, 789, 790, 793, 796
<223> n = A,T,C or G

<221> misc_feature
<222> 817, 822
<223> n = A,T,C or G

<400> 675
ccnggcaggt acacctaacc agnaacngaa atcattntnt nagnnnccan ancacagaat 60
gnncttggtg agattggccn gcggcnttcg aggaactgat tgntgcggca gntnatnagc 120
acttgnntat tgntcttgac tgactgngtg agcacagaga gtggaccggt gttaaattcc 180
tcctcctctc gcttctgcag cttcctctgg ggccatctca ctcttgggct tgntgaggag 240
gctcatggat ggtcacntac gctctccgtt tcactcccgt tttcctccgc cgttngcttg 300
ctgccttgaa gggagaagcc ccncngtacc tcgggcccgc ttcttagaac tagtggaatc 360
cccccggggc ctgcagggaa attccgatat caagccttat tcgatacccg tcgaccttcg 420
naggggggggg gncccggnta cccangcttt tgttcccctt taggtgaggg gtttaatttg 480
ccgcgccttg gcgtaatcat gggtcattag gcctgttttc ctggtgtgna aattgttaat 540
cccgctcaca aattcccaca accaaaccat taacggangc ccgggggaag ccataaaaag 600
tngttaaaaa gcccctnggg gggntggccc taaaatgaag tngaagcctt anaccttcaa 660
caattttaaa tttggccgtt tngncgcctt caactttggc ccggntttt ccaantttcc 720
ggggaaaaac cctggttcgt ggccccagcc ttggcatttn aattggaaat tcggncccaa 780
acnccccccnn ggnggnaaaa aggccgggtt ttgccanaat tngggccgc ctttttccc 840
c 841

<210> 676
<211> 425
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 45, 69, 387
<223> n = A,T,C or G

<400> 676
acgcggggac attttctcgg ccctgccagc ccccaggagg aaggngggtc tgaatctaac 60
accatgacng aactagagac agccatgggc atgatcatag acgtcttttc ccgatattcg 120
ggcagcgagg gcagcacgca gaccctgacc aagggggagc tcaaggtgct gatggagaag 180
gagctaccag gcttcctgca gagtggaaaa gacaaggatg ccgtggataa attgctcaag 240
gacctggacg ccaatggaga tgcccaggtg ggacttcagt gagttcatcg tgttcgtggc 300
tgcaatcacg tctgccttgt cacaagtacc ttgcccgggc cggccgctct agaactagtt 360
gggatccccc gggctgcagg gaatttncga tatcaagcct tatcgatacc cgtcgaccct 420
cgagg 425

<210> 677
<211> 292
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 63, 117, 122, 165, 204, 226, 227, 251, 257, 272, 280, 285,
286
<223> n = A,T,C or G

<400> 677
ctttagtgag ggttaaattg cgcgcttggc gtaaatcatg gtcatagctt gttttcctgt 60
tgngaaattg ttatcccgct tcacaaattt ccacacaaac aatacggaag cccgggngcc 120
antaaaagtg ttaaaaagcc ctggggggtg ccttaaatgg aagtngagcc taaccttcac 180
atttaatttg cggtttgccg cctncaactg ggcccgcttt tcccanntcc ggggaaaacc 240
cttgttccgt ngcccancct tgccatttta antgaattcn ggccnnaccc cc 292

<210> 678
<211> 351
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 72
<223> n = A,T,C or G

<400> 678
aggtacgcgg gagtgcccca ggagctatga caagcaaagg aacatacttg cctggagata 60
gcctttgcga tntttaaatg tccgtggata cagaaatctc tgcaggcaag ttgctccaga 120
gcatattgca ggacaagcct gtaacgaata gttaaattca cggcatctgg attcctaatc 180
cttttccgaa atggcaggtg tgagtgcctg tataaaatat tctatgttta ccttcaactt 240
cttgttctgg ctatgtggta tcttggatcc tagcattaag caatatgggt acctgcccgg 300
gccggcccgc tctagaaact agtgggatcc ccccgggcct gcagggaatt c 351

<210> 679
<211> 177
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 9, 96, 132, 159
<223> n = A,T,C or G

<400> 679
cnaccctcna gggggggccc cgggtacccc agcttttttt gttcccttta agtgaagggg 60
tttaaatttg ccgccgcttt ggccgtaatc atgggncaat taggcctggt tttccctggt 120
ggtggaaaat tngtttattc ccgctcacca aatttcccnc acaaacatac cgaagcc 177

<210> 680
<211> 276
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 28, 251, 268
<223> n = A,T,C or G

<400> 680
gctccaccgc ggaggcggcc gaggtacncg ggggctgaat aaagccgtgt ctcatctacc 60
tgctgtctcc caagtgttct tccagctccc tgcccctcat caacccactc tcctcagacc 120
tcagctgggg cttgaacctg ataattggtg tagtcatcag gatgagattt agaagtggtg 180
gtgcccctct tgtgacagca tttggcagtg tgcagttggg ccatcaataa atccaaggtc 240
caagggaaca natgaaaaaa aaaaaaanaa aaaagt 276

<210> 681
<211> 49
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 30
<223> n = A,T,C or G

<400> 681
gaattcnata tcaagctttt ctataccgtn taccttcgag gggggggc 49

<210> 682
<211> 525
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 70, 390, 414, 433, 467, 497
<223> n = A,T,C or G

<400> 682
caggtacgcg ggatctatga gaagaagtnt ggccaagtcc ccatgtgtga cgccggtgag 60
cagtgtgcan tgaggaaagg ggcaaggatc gggaagctgt gtgactgtcc ccgaggaacc 120
tcctgcaatt ccttcctcct gaagtgctta tgaaggggcg tccattctcc tccatacatc 180
cccatccctc tactttcccc agaggaccac accttcctcc ctggagtttg gcttaagcaa 240
cagataaagt ttttattttc ctctgaaggg aaagggctct ttttcctgct gtttcaaaaa 300
ataaaagaac acattagatg tttactgtgt gaaagaataa tgccttgtat gggtgttgat 360
accgtgtgtg aagtattctt attttatttn tctgacaaaa ctcttgtgta cctngggccg 420
ctctagaaac tantgggatc ccccccgggc cttgcaagga aatttcnaat atcaaagcct 480
tatccgatac cccgggncgg acccttcgga agggggggg gcccc 525

<210> 683
<211> 701
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 364, 505, 537, 574, 601, 647, 648, 671, 691
<223> n = A,T,C or G

<400> 683
acctgcatca gcattagtaa tcaacctgtt aatccaaggt ctttagaaaa acttgaaatt 60
attcctgcaa gccaatttg tccacgtgtt gagatcattg ctacaatgaa aaagaagggt 120
gagaagagat gtctgaatcc agaatcgaag gccatcaaga atttactgaa agcagttagc 180
aaggaaaggt ctaaaagatc tccttaaaac cagaggggag caaaatcgat gcaagtgctt 240
ccaaggatgg gaccacacag aggctgcctc tcccatcact tcccttacat ggaagtatat 300
tgtcaagccc ataattgttt cttaagtttg cagttaccac taaaaggtga cccaatgatt 360
ggtnaccaaa tcagctgcta cttactcctg tagggaaggg ttaaatgttc attccatcct 420
aaggcctatt caaggtaata actcttaccc tgggcactta taatggttaa agccttctac 480
tgagggtgct attgttcctt taagngggat ggttctgacc cttgcttcaa atatttnccc 540
tcaccttttc ccaatctttc ccaaggggta cccntgcccc ggggccgggc ccgcttctta 600
ngaaacctaa gtgggattcc cccccggggc cttgcaaagg aatttcnnat tatccaagcc 660
tttattcgga ntaccccgtc cgacccttcg nggggggggg g 701

<210> 684
<211> 595
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 23, 26, 36, 95, 220, 250, 354, 358, 372, 383, 425, 458, 459, 464, 485, 491, 504, 526, 572, 576
<223> n = A,T,C or G

<400> 684
tccacccgcg gtggcggcnc gangtncgcg gggccngctg gtagtaattc cgcttcctgt 60
ccgactgtgg tgtctttgct gagggtcaca ttgangctgc aggtctgaat ccggggtgcc 120
tttaggattc agcaccatgg cggaagacat ggagaccaaa atcaagaact acaagactgc 180
cccttttgac agctcgcttc cccaaccaga accagactan gaaactgctg gcagaactac 240
ctggacttcn caccgctgtc aggaaggcaa ttgacccgct aaagggaggc cgaatatctc 300
ttgtgtgccg aatgggtacc cttgcccggg gccggcccgc ttcctaagaa accnaagntg 360
ggatgccccc cngggcttgg cangggaaat ttcggatatt caaaggcttt atcggataac 420
ccgtnccgac ccttctgagg gggggggggc ccccggtnnc ccancttttt tggttcccct 480
tttantggaa nggggtttaa attngccgcc gctttgggcc gtaaantcaa ttgggttcca 540
ttagccttgt ttttccctgg tggtggaaaa anttgnttta attcccgctt tcacc 595

<210> 685
<211> 499
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 212, 334, 381, 404, 448, 457, 458, 459, 460
<223> n = A,T,C or G

<400> 685
ccgggcaggt tcgcggggga cattttctcg gccctgccag cccccaggag gaaggtgggt 60
ctgaatctag caccatgacg gaactagaga cagccatggg catgatcata gacgtctttt 120
cccgatattc gggcagcgag ggcagcacgc agaccctgac caagggggag ctcaaggtgc 180
tgatggagaa ggagctacca ggcttcctgc angagtggaa aagacaaggg atgcccgtgg 240
ataaattgct caagggacct ggacgcccaa tgggagatgc ccaggtggga ccttcagtgg 300
agttcatcgt ggttccgttg gcttgcaatc accntctggc cctgtcacaa gttaccttcg 360
gcccgcttct aagaaactta ntgggatccc ccggggcttg caanggaaat ttcggatatt 420
caaagccttt attccgaata ccccgttncg aaccttnnnn aggggggggg gcccccccggg 480
ttaccccccaa gccttttttt 499

<210> 686
<211> 139
<212> DNA
<213> Homo sapiens

<400> 686
cgaggtacgc gggagaggcg actgtcccca cctgaatgct taaatgcctc gttactggga 60
ggtgttctca gaagagccaa atcgaaaaat ggaggccggt ccttgcggga gaagttggac 120
aagattgggt tgaatcttc 139

<210> 687
<211> 242
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 181, 204, 230
<223> n = A,T,C or G

<400> 687
gtcattagcc tgtttccctg tgtggaaatt gttatcccgc tcacaatttc cacacaaaca 60
ttaccgaagc ccggggagca ttaaaagtgg taaaagccct gggggtgcc ctaatgaagt 120
ggagctaact cacattaaat tggcgtttgg cgctcactgc ccgcttttcc aagtccgggg 180
naaacccttg ttcgtgccca agcntgcatt aatgaaatcg gccaaccgcn ccgggggaag 240

aa 242

<210> 688
<211> 305
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 64, 124, 142, 202, 222, 263, 280, 287, 288
<223> n = A,T,C or G

<400> 688
ccactaattc aaggactctt accgtgggag caactgctgg ttctatcaca atgaaaccgc 60
tggnttgtgt gctcttggtg cgctcctctg cagtggcaca gttgcataaa ggatcctacc 120
ctgngatcac cactggcatc tntggaagaa aacctatggc aagacaaata caagggaaaa 180
agaatgaaga agcagtacct gnggcccgct cttagaacta gnggggatcc ccccgggcct 240
gcaagggaat tccgatatca agncttatcg aatacccgtn gaccttnngg aggggggggg 300
ccccg 305

<210> 689
<211> 461
<212> DNA
<213> Homo sapiens

<400> 689
cgaggtactc tccaagctgc tcaaaaagct cacaattttg tttgattaaa ttctgaggct 60
cttccacaag aggtttaaat tcatcgaaca ctttggcata gcattcatga ggatctgcag 120
cggcacagca cttctctaga gtggtttcat atgtcttggc aagtctcggc agtagcacga 180
cagagtaatc aggatgcctt cttgcatatt catacaaaaa catgcccagg gaagacatcc 240
tttgcctcag catagttttt gcaaacatcc ttactttcaa caaaatcaac agcttaatgg 300
aaggcaaggt caagcaggcc atctcatcca ttttccactt tcggcaatcc ccgccgtacc 360
tgccccgggc cggcccgctc taggaactag tgggatcccc ccgggctgca gggaattccg 420
atatcaaagc cttatcgata cccgtcggac ctcggagggg g 461

<210> 690
<211> 349
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 57, 101, 139, 190, 259, 265, 270, 327
<223> n = A,T,C or G

<400> 690
agtggagggg ttaattgcgc cgccttgggc cgtaaatcca tggggccata agcctgnttt 60
ccctgtgtgg aaaattgggt atcccgctca caaatttccc ncaccaacca ttaccgaagc 120
ccgggaagcc attaaaagnt gtgaaaagcc ctggggggtg gccctaaatg gagtggaagc 180
cttaaacctn accatttaat tttggccgtt tggcggcctc accttgcccc cggctttttc 240
ccaagttcgg gggaaaaanc cctgntccgn tggccccagc ctggcattta aatggaaatt 300
cgggccccaa cccccccccg ggggaanaag gcccggtttt gccctattt 349

<210> 691
<211> 816
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 40, 354, 650, 708, 729, 757, 797, 800
<223> n = A,T,C or G

<400> 691
attggactcc accgcggtgg cggccgcccg ggcaggttcn cgggacattt tctcggccct 60
gccagccccc aggaggaagg cgggtctgaa tctagcacca tgacggaact agagacagcc 120
atgggcatga tcatagacgt cttttcccga tattcgggca gcgagggcag cacgcagacc 180
ctgaccaagg gggagctcaa ggtgctgatg gagaaggagc taccaggctt cctgcagagt 240
ggaaaagaca aggatgccgt ggataaattg ctcaaggacc tggacgccaa tgggagatgc 300
ccaggtggac ttcagtgagt ttcatcgtgt tcgtggcctg caattcaccg tctngcctgt 360
cacaaggtac cttcggccgc tctaagaact agtgggatcc cccggggctg cagggaattc 420
cgatatcaag cttatccgat acccgtcgac ctcgaggggg ggggcccggg taccccaagc 480
ttttgttccc tttaagtgag ggttaaatt tgccgcgctt ggcgtaatca tgggtcaata 540
agctgttttc ctgtgtgaaa attgtttatc ccgcttcaca aattccacac caaccattac 600
cgagcccggg agcataaaag tgtaaagcc tggggtgccc taaatgaagn ggagcctaac 660
ctcacattta attgccgttt gcgctcactt gccccgcttt tccaagtncg ggaaaaaacc 720
ctggtccgng cccagcttgc atttaaatgg aaattcnggc ccaaccccc ccgggggaag 780
aaggcccgtt tttgccnttn ttttggggcc gccttt 816

<210> 692
<211> 839
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 185, 273, 287, 295, 375, 380, 384, 388, 416, 455, 458, 459,
461, 475, 493, 502, 534, 541, 615, 617, 621, 640, 648, 654,
658, 660, 665, 670, 674, 689, 701, 712, 714, 715, 722, 732,
734, 739, 746, 748, 749, 767, 774, 779, 782, 783, 787
<223> n = A,T,C or G

<221> misc_feature
<222> 791, 796, 798, 805, 809, 811, 818, 828, 832
<223> n = A,T,C or G

<400> 692
ccgggcaggt acttgcaatg gggccaccat gttttctccc attagccagc cccattcatc 60
atggatgcta tgagtcagcc agggggcagg cttgccatgg gttttgtgac acccccatcc 120
aaagctcacc atgttgcatc ccgcccattg tctgtgggac cccaagtttc tagccatgtc 180
cagtncttca caaaagctgg atgcacatgc caaggcaagc catccacagc tgctgctgga 240
agggtggtgc aagatctaac agttggagga canttgggcc acctcangca taggngtgga 300
gcccaagtcc accaatggtt tgtttggaag cattgccaaa ccctgtgggc ttgagccaaa 360
aataactccc caagnaattn tggncaanac aattcccggc cccttggacc tttggnattt 420
aatttgatgg ccccaacttg cacactggcc caaanganntn nctcactaag agcgnggcca 480
ccaacccaac ttntataaaa angctcattc cctcgatgga actaacaccc aaantttatc 540
nagggtttc aaagcccccc agcttggaag ggtcctggag ggaaaaagtt ggggttttga 600
atggaatggg ggccnanggg naagccttgg gaaaggaaan caacttgngg ggangacnan 660
gccanggttn ggangaagaa caacgggcnt tttatttcaa ncccccccgc cntnnccctt 720
anggggccgg tntnttaana aacctnanng gggatccccc ccggggncct tggnaaggna 780
annttanata ntccangnct taaanggant ncccgggnat aaaccttnta angggggg 839

<210> 693
<211> 255
<212> DNA
<213> Homo sapiens

<400> 693

caccgcggtg gcggccgagg tacgcgggct gggcaaggca gacttctctg gaatgtccca 60
gacagacccg tctctgtcca aggtcgtgca caagtctttt gtggaggtca atgaggaagg 120
cacggaggct gcagccgcca cagctgccat catgatgatg cggtgtgcca gattcgtccc 180
ccgcttctgc gccgaccacc ccttcctttt cttcatccag cacagcaaga accaacggga 240
ttctcttctg cggca 255

<210> 694
<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 110, 114, 138, 139, 195, 275, 291, 307, 311, 312
<223> n = A,T,C or G

<400> 694
ctgcagggaa ttccgattat tcaagcctta tccgataccc gtcgacccta cgaggggggg 60
ggccccggta ccccagcttt tgttcccctt ttagttgagg ggtttaaatn tgcnccgcct 120
tggccgtaat caatgggnnc atagctggtt ttcctgtgtt gaaaaatttg tttatcccgc 180
tcaccaattc cacancaaac atacgaagcc cggggtagcc ataaaagttg ttaaagccct 240
gggggtgcct taaatgaagt tgaagcctaa actcnacatt taaatttggc ngttttggcg 300
cttcaanttg nncccgcttt ttcccagttc cggg 334

<210> 695
<211> 816
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 3, 4, 18, 24, 33, 34, 35, 42, 49, 65, 66, 74, 79, 94,
100, 103, 106, 127, 144, 157, 159, 241, 250, 282, 486, 507,
578, 586, 608, 614, 627, 645, 646, 654, 656, 661, 704, 723,
730, 755, 771, 781, 787, 794, 799, 803, 805
<223> n = A,T,C or G

<400> 695
ncnngccagg tacgcggngg aaangggagt gannnaagag cntagtganc atcatgagcc 60
ttctnnacaa gccnaacant gatatgaccc cagnggagcn gcncangcga gaggaggggg 120
aatttancac cggtccactc tttntgctca cacagtnant caagaacaat acccaagtgc 180
ttatcaactg ccgcaacaat aagaaactcc tgggccgctg aaggccttct ataggcactg 240
naacatgggn gctggagaac gtctaaggag atgtggactg angtaccttt gccggccggg 300
caggtaccag aatataggtt cccaaataga tccctggttt gtctttagag acactgaagg 360
ggacaacaat agccaattcg ggatttcaaa caccccacaa actatacctt aggctctgtg 420
agggcaaaag acacagttta tttcaacaac gatcttgttc aacagaacct ggtcaccaag 480
tggatngatg gatggggcca gacccanatt gggacaagaa ctacttcaag tggggtgggc 540
tacattgtgc tttgccttgc ccccgggaac accattgnac ttcacntttt tgcaattgct 600
tacattanaa ctanaagttt tggcttncat tcaattgaaa aatannataa gttntnggca 660
nttgaaaaac cttaacaaaa aaccctttttt acccccggcg tttncctttg gggccggttt 720
tanaaactan ttggatttcc ccccggcttt tgcanggaaa tttcgattat ncaagccttt 780
ntttgantac ccgnccaanc ctncnaaggg gggggg 816

<210> 696
<211> 476
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 125, 129, 183, 265, 452
<223> n = A,T,C or G

<400> 696
tatagggcga attggagctc ccgcggtgcg gcgccgggca ggtcataatc gttttgtgga 60
gtcgcacagt tcaggttatg gaggcccgta attaccaaag tgtaaaaaag ggcaaaggaa 120
acacncctnc attgtagaat aaggcattca aatgtgctgt taccgtttaa aggcagctaa 180
tgncaaaaca ggcaagtcaa gaaaagtggt ctggttttgg aggtgatttt gcatctagaa 240
gcattctctt ctcgtgcctc aaagnctgac cactgtagag catgtcttct tcctcaaggc 300
caatgatact tcagatccca gatggtttca tttttcaatt gcggtccaaa gagagggttg 360
agttgggcca gaattgcaat cagccaaaag agatagcagc aacctgacca ggtcaccacc 420
atggtaatgt aactccccgg taggaccctt anggatgaac caaggcccaa gaagcc 476

<210> 697
<211> 215
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 15, 16, 39, 41, 60, 189, 190
<223> n = A,T,C or G

<400> 697
ctttnggcga ttggnnctcc ccgcggtggc ggccgaggna naatagacag cgcagcaaan 60
agaaggcgcg ggctgggtgg gaagaggatt cggactcgtc acactgcaga gcagcagagc 120
gagaaaggat gagaagaggc agagaaggcg acggcagaaa gaaaaaggaa aactgcggcc 180
gaggacttnn tttttttttt tttttttttt ttttt 215

<210> 698
<211> 202
<212> DNA
<213> Homo sapiens

<400> 698
gcaacactgg ggtaaggtca ctgtgggatg gttgcctgct gagacctgtg caaacgtaac 60
acatgccacc atgccaagga tgtggcggaa caagcagccc taccaaggct gggcccccat 120
ggactttgtg cctgctggga gtttataggt ctgtggggac ataggatggc catatctgcc 180
agccaactag actggacatt gt 202

<210> 699
<211> 579
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 62, 72, 74, 181, 209, 266, 308, 329, 397, 412, 413, 426,
436, 470, 481, 532, 539, 561
<223> n = A,T,C or G

<400> 699
ccgggcaggt acgcgggacc tggtcagaca caatgttggc actctagggg gatggtgact 60
gnggccctgg cntntgctca tcatggtggt gagcactttg aaggcgagaa ggtgttccgt 120
tgttaacgtt gaagatgaaa atcacattaa cataatccgc gagttggcca gcacgaccca 180
nattgacttc tggaagccag attctgtcnc acaaatcaaa cctcacagta cctcggccgc 240
tctaggaact agtggatccc ccgggnctgc aggaaattcg atatcaaagc tttatcggat 300
acccgtcnga ccttcgaggg gggggcccng gtaccccagc tttttgttcc cctttaagtg 360

gagggttaaa ttggcgcggc cttgggcgtt aatccantgg ttcaataagc tnnttttcct 420
ggggtngaaa atttgnttat tccccgcttc aacaaatttc ccaacaccan acaataaccg 480
nagtcccggg gggaggccat tacaagttgg ttaaaaagcc ccttgggcgg tngcccttna 540
atggaaggtg gaagccttaa nctttcacca tttaaattt 579

<210> 700
<211> 856
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 83, 84, 111, 323, 505, 579, 655, 662, 691, 714, 739, 748,
752, 758, 797, 810, 826
<223> n = A,T,C or G

<400> 700
tatagggcga attggactcc accgcggtgg cggccgaggt acccaggatc tggaaggaaa 60
gggccaagct gggctgtggc atnnactgga ccctagagtc tcattgggca nggcctcaga 120
atccacaaag actccccagt gctgttcctc ttccaacgag gctggacccc ttccagccat 180
ctgggaactc aagcaggaag gaaggttcct taggacaggt tcctggcatg gcaggttccc 240
ctggaagtgg tcggagggcc ctcccacctc ttgatgccag cagaagtcag gccttccctg 300
ctccctgagg acacatcagg gcnttcttgc gggacttggt cttctggttc acacttggca 360
cgttccaaga cccaggtacc ttgcccgggc ggcccgcttc tagaaactaa gtggggatcc 420
cccccgggcc tgccagggaa tttcgatatc aaaagcttat ctgaataccg tccgaccttc 480
gagggggggg gccccgggta cccanctttt tgttcccttt tagtggaggg ttaaattggc 540
gccgcctttg gccgtaaatc attgggtcaa taagcctgnt tttccttgtg ttgaaaaatt 600
ggtttattcc gcttcaacaa attcccacac aaacaattaa cgaagccccg gggangccat 660
tnaaaagatg gtaaaaggcc ctgggggggt ngcccctaaa tggaggtgga agcnttaacc 720
ttaccattta aatttgcgnt tttgcggnct tnacttgncc ccgtttttc caaggcccgg 780
ggaaaaaccc ttgttcnttg ccccagcctn gcatttaatt gaaatngggc ccaactcccc 840
ccgggggaaa aaaggc 856

<210> 701
<211> 642
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 72, 76, 77, 99, 101, 423, 445, 468, 489, 557, 566, 633
<223> n = A,T,C or G

<400> 701
attggactcc accgcggtgg cggccgaggt acagttttct cagaagactc aagatttcgc 60
ccacatccct tngagnnccc gctagatctg ccgcccggnt ncatttgtcc cactcttcag 120
gacagagtta gctgccctct ttctttactt catagtcttt gtaagggctc ggccaagcgt 180
gggcccgtgg gatggagaat tccttttggg gaggctggtt ctgcagctga aaatgtgtgg 240
aatagggggc atagagcgtg tcccctgtct cttcaaaacc ttgaggtgat ttcctcttga 300
ggggtaggct ctgttctcca caccataagc tctttcttca ccgaagttga ggtttacagg 360
aaagccatcc ctccaacagg gataaatccc atgggggggtt tcgttgcttt gtgagcaagc 420
canaaaactc cgggggacct aacantaaaa ccaaccaagg gaacaccnca gccaattggg 480
ccagccaang gcgggagctt gaagggatgg tggtcattcc caccctgccg gtcaaaaggt 540
tcaagggaaa cattgangca ggggtngatc ccagggccca ccccagaatg ggcaatggga 600
agaagggaag catccgttga agggtaaaaa tgntgggggc cc 642

<210> 702
<211> 805
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 328, 333, 404, 516, 517, 545, 555, 575, 585, 592, 618, 633, 643, 676, 687, 690, 716, 735, 746, 747
<223> n = A,T,C or G

<400> 702
ccgggcaggt acgcggggag tccccacctc tctcagcttc cggctggtag tagttccgct 60
tcctgtccga ctgtggtgtc tttgctgagg gtcacattga gctgcaggtt gaatccgggg 120
tgcctttagg attcagcacc atggcggaag acatggagac caaaatcaag aactacaaga 180
ccgcccctttt tgacagccgc ttccccaacc agaaccagac tagaaactgc tggcaagaac 240
tacctggact tccaccgctt gtcagaaggc aatgacccgc taaaggaggc cgatatctct 300
gtgttgcgga atggtaccct cggccggntc tanaactagt ggatcccccg ggcctgcag 360
gaaattcgat atcaagcctt attcgatacc cgttcgacct tcgnaggggg gggggccccg 420
gtaccccagc ctttttgttc ccttttaatg aggggttaaa atttgccgcc gccttggggc 480
gtaaattcat gggtcaatta gcctgttttt ccttgnngtg gaaaaatttg tttattcccg 540
gcttnaacaa atttnccacc acaaaccatt accgnagccc ggggnaggcc antaaaaagg 600
tggttaaaaa ggcccttngg ggggtggccc ctnaaatgga agntggaagg cctaaacctt 660
caacaattta aaattngccg gtttggncgn cttcacttgg ccccgctttt tccaanttcg 720
ggggaaaacc cttgntccgt tggccnngct tgcaatttaa attgaaaatc cggcccaacc 780
ccccccgggg gaggaagggc ccggt 805

<210> 703
<211> 398
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 218, 323, 338, 372, 383, 389
<223> n = A,T,C or G

<400> 703
aggtacggag caatcgagga ggcataacca cacttggggt ggctataggg ctggaaaacg 60
ctgaagatga ctgctttcac tgaggttaag gattgtaata ttgccagctt tgtaaagtca 120
ttaaagcaga agtttcttca gtgatcttct ctctaagaaa caccatcacc tccatgtgcc 180
ttacagaggc ccccccgcgt acctgcccgg gcggccgntc tagaactagt tggatccccc 240
gggctgcagg taattcggat atcaagctta tccgaatacc cgtcgacctc tgaggggggg 300
ggccccggtt cccaagcttt ttngtttccc ttttagtnga gggggttaaa tttgccgcgc 360
tttggcgtta antcattggg gtncaatang cttggttt 398

<210> 704
<211> 531
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 348, 379, 385, 402, 415, 427, 431, 462, 484, 487, 489, 512
<223> n = A,T,C or G

<400> 704
acaaggtgct aaaacaggtt caccccgata ctggcatctc atccaaggcc atgggcatca 60
tgaattcctt cgttaacgac atcttcgaac gcatcgcagg cgaggcttcc cgtctggccc 120
actacaacaa gcgctcgacc attacctcca gggagatcca gaccgccgtg cgtctgctgc 180
ttcccggaga gctggccaag cacgcagtgt ccgaaggtac ctcggccgct tctagaacta 240
gtgggatccc ccgggctgca gggaattcga tatcaagctt aatcgatacc cgtcgacctt 300

cgaggggggg ggccccggta cccaagcttt tggttcccct tttaagtnga aggggttaaa 360
ttgcgccgct ttgggcggna aattnattgg gtcaataagc tngtttttcc ctggngggtg 420
gaaaatntgg nttattcccg gcttcaacca aatttttccc ancaaccaaa acaattaccg 480
gaangcncng gggaggccaa taaaaaaggt tngttaaaag gcccttgggg g 531

<210> 705
<211> 616
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 310, 324, 351, 489, 567, 576, 596
<223> n = A,T,C or G

<400> 705
ttggagctcc accgcggtgg ccggccgagg tacgcgggca tgctggagat ggacaactca 60
atgaaaattt aaagggaaaa ccctcaggcc tgaggtgtgt gccactcaga gacttcacct 120
aactagagac agtcaaactg caaaccatgg tgagaaattg acgacttcac actatggaca 180
gcttttccca agatgtcaaa acaagactcc tcatcatgat aaggctctta ccccctttta 240
atttgtcctt gcttatgcct gcctctttcc gcttggcagg gatgatgctg tcattagtat 300
ttcaccaagn aagtagcctt tcangagggg taaccttaac aggagtgtca ngatctatcc 360
ttgtcaatcc caaaccgttt ttacattaaa aataagagga tccttttaag tgcaccccag 420
tggacctgac attaagcagg catctttaaa cacagcccgt gtgtttcaaa atggtaccct 480
gcccggggnc gggccgctct aagaactagt gggatccccc ggggcctggc agggaattcc 540
gatattcaaa agcttatcga tacccgntcg accctngagg ggggggggcc cgggtnccca 600
gctttttggt tcccct 616

<210> 706
<211> 175
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33
<223> n = A,T,C or G

<400> 706
gctccaccgc ggtggcggcc gcccgggcag gtnctccttg aataccactt agagtcagaa 60
agataaggca gcaaatcaga atggcagttt gattcatggt gctgagactg gaggttcctc 120
tgctgtaggc tcagaatatg tctaagcaat tgaggaatgt ctcccccgcg tacct 175

<210> 707
<211> 271
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 21, 55, 58, 105, 116, 118, 122, 162, 167, 204, 214, 237,
243, 265
<223> n = A,T,C or G

<400> 707
taagttgaag ggttaaattt ngcgccgcct tgggcgtaaa tcatgggtca ttagnctngt 60
ttccctgtgt ggaaattgtt tatcccgctc aaccaatttc caccncaaac cattancnga 120
anccccgggg aagccaataa aaagttgtta aaaggccctt gnggggnttg cccctaaaat 180
tggaaggtgg agccttaaac cttnaacaat ttanaatttt ggcggttttg gcggccntcc 240

acnttggccc ccgctttttt ccaangtccg g 271

<210> 708
<211> 221
<212> DNA
<213> Homo sapiens

<400> 708
aggtaccacg atgtatagag caacactggg gtaaggtcac tgtgggatgg ttgcctgctg 60
agacctgtgc aaacgtaaca catgccacca tgccaaggat gtggcggaac aagcagccct 120
accaaggctg ggcccccatg gactttgtgc ctgctgggag tttataggtc tgtggggaca 180
taggatggcc atatctgcca gccaactaga ctggacattg t 221

<210> 709
<211> 480
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27, 28, 34, 43, 45, 59, 76, 158, 168, 214, 222, 307, 308,
324, 347, 358, 387, 446, 463, 470
<223> n = A,T,C or G

<400> 709
ttagctccac cgcggtggcg gtcgccnngg gcangtacct acngngtggc gctggggtnt 60
ggctccatga ccatanatct attgggggac gtcagagaaa cggcgtcatg cccagccact 120
tcagccgagg ctccaagagt gtggcccgcc gggtcctnca agccctgnag gggctgaaaa 180
tggtggaaaa ggaccaagat ggcggccgct ctanaactag gnggatcccc ccgggctgcc 240
aggaattcga tatcaagct tatcgatacc cgttcgacct ctgagggggg gggccccggt 300
accccannct tttttgttcc cttntaaatt gagaggttaa atttgcngcc gctttggncg 360
ttaaatcaat gggtccataa gccttgnttt cccttggtgt tggaaaaatt tgttttaatt 420
cccgcttcac caaaattttc ccaacnacca aaccaattta ccngaaggcn ccgggggaag 480

<210> 710
<211> 706
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 308, 338, 367, 475, 488, 494, 506, 508, 600, 604, 609, 617,
622, 631, 638, 642, 652, 659, 665, 676, 679, 693, 706
<223> n = A,T,C or G

<400> 710
ccgggcaggt acgcggggag agaggttgag aacaacccag aaaccttcac ctctcatgct 60
gaagctcaca cccttgccct ccaagatgaa ggtttctgca gcgcttctgt gcctgctgct 120
catggtagcc actttcagcc ctcagggact tgctcagcca gattcaagtt tccattccaa 180
tcacctgctg ctttaacgcg atcaatagga aaattcctat ccagaggctg gagagctaca 240
caagaatcac caacatccaa tgtcccaagg aagctgtgat cttcaagacc caacggggca 300
agggaggnct gtgctgaccc caaggagaga tgggtcangg attccatgaa gcatctggac 360
caaaatnttt caaaatctga agcccatgag cctttattac atgggacctg agagtcaaaa 420
gcttggaaga aaaggcttat tttatttttc cccaacctcc ccccaagggg ccagnggggа 480
ccatttantt ttanttatta accatncncc aaaagagaat tatttttttta aaattaattt 540
taaaaagcat taaatttttt ttttttaaaa aaggggtttt taaattatta tttttaaagn 600
tggntggang ggttttnaac tnttattttt ngcaaacnat tnctaaaggg gnaatggtna 660
aaaanggcaa aaaatnccng ggggggaggg ggntttttgg gttttn 706

<210> 711
<211> 496
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 201, 207, 217, 232, 296, 298, 301, 316, 318, 332, 349, 350, 352, 376, 391, 408, 423, 440, 441, 442, 445, 446, 459, 463, 470, 475, 483
<223> n = A,T,C or G

<400> 711
cgaggtacgc ggggacattt tctcggccct gccagccccc aggaggaagg tgggtctgaa 60
tctagcacca cgacggaact agagacagcc atgggcatga tcatagacgt cttttcccga 120
tattcgggca gcgagggcag cacgcagacc ctgaccaagg gggagctcaa ggtgcttatg 180
gagaaagagc taccaggctt nctgcanagt ggaaaanaca agggatgccc gngggataaa 240
attgctcaag ggaccttgga cgccaattgg gagaatgccc caagtgggac ttttantnga 300
ngttcattcg tggttngngg gcttgcaaat tnacgttttg gccttgttnn cnaaaggtac 360
ccttgccccc gggccngggc cggtttttaa naaactaagg tgggaatncc ccccggggct 420
ttngcaggga aattttcgan nnttnnaaag cctttattng aantaccccn gcccnaacct 480
ttnaaggggg gggggg 496

<210> 712
<211> 439
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 290, 291, 295, 297, 302, 308, 319, 340, 395, 408, 416, 423, 424
<223> n = A,T,C or G

<400> 712
aggtacgcgg gattgagagc tctgctatgc cactgttgaa tttttcccaa gattcctgtc 60
cctagccctc acttcaaact ctgcttcctt ggacagattt ggcaatagct ttgtaagtga 120
tgtggacata attgcctaca ataatgaaaa cctacaggaa tttttttatt tttcattttc 180
cccttaggca tatttagtat ttttcccccca ggcagatcat tctgagtgtg cgagtgtgtg 240
tgcacatgtt acaaaggcaa ctaccatgtt aataaaatat tcaattttgn nctangnaaa 300
antatganga aaagggtanc tgcccggggc ggcccggttn taagaaacta gtggatcccc 360
cccgggcttg caagggaaat tccgaatatt taagnttaat ccgaatancc gggcgnaccc 420
ttnnaggggg gggggggccc 439

<210> 713
<211> 432
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 41, 68, 80, 93, 107, 118, 131, 153, 196, 198, 204, 207, 212, 228, 232, 246, 257, 265, 278, 288, 303, 324, 325, 327, 337, 340, 342, 343, 344, 347, 348, 360, 361, 372, 374, 377, 386, 401, 402
<223> n = A,T,C or G

<400> 713

aaattggagc ctccacccgc ggtggcaggc ccgaggtacc nttttttttt ttttttttt 60
tttgattngc aacaggcaan aagtttatcg acncactaat gattaancaa ggaaaacnca 120
ttttacaatt naaagacaaa accgaaccaa tangacaaaa gaatctgata aaggattaca 180
ggagtagctg cagctntntg gccncangtt tnttagcagt agcttcanca cncctttgt 240
taaggntgtc atacatntat acatnctggg ggaccagnga ctcaagcntg cctgcatttt 300
acntctttga aatttttaca ttcnnanaac cagccgnttn gnnnacnnaa aagtttgggn 360
nggtacattt antnccnaac acacanggcc ctggggttcc nncctgcgtt tttattggcg 420
aaattttta aa 432

<210> 714
<211> 618
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 425, 450, 511, 533, 554, 559, 568, 575, 587, 605, 615
<223> n = A,T,C or G

<400> 714
gaaagggtat gttaaatagt tcagccagta gctcaccaca gggattaagg gcatctgcca 60
gaatgacatc aaactttgac tcttgtagtt tcatcataag tttcttattc aaaactgcat 120
ctttacagag cttgttactg tagtcataat attcccaaca caattcttgt aattgtgaaa 180
aatatgacca aaatgtattt tttgaaacac catatatcca tctatcgaga attttcagaa 240
gagaatcttc caaatcattt ttagttaaag atgtaggata aacttctaat ttaatagcag 300
atgatttact ggcattgaca agagtagaag ccgaagatgt caacacagtc acctcatgga 360
cccctctgga caagctcttc ccagggattg gtcttcatat ttatcccaat ggctggtatt 420
ctggngggcc cccacttagc accttttcan caagctttcc cagagcttaa agttaaccaa 480
cctggagctc ccgcggtacc tgccccgggc nggccgcttc taagaaccta ggnggatccc 540
ccccgggcct gcanggaant tccgattntc aaagncttat tcgattnccg tccgaccctc 600
cgaangggg ggggnccc 618

<210> 715
<211> 231
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 40, 42, 68, 231
<223> n = A,T,C or G

<400> 715
ggctcccatc ctccggaatc tgcaaaatgg ctncttcttn anaaataatg gggagaggga 60
tggctttnag gccagagatc aaggccctcg agtattaact tgagcatttg ggcacaaaat 120
agacactttt ggattttccc gtcttttcca acaccaagga tgagattatc aaaagatgtg 180
ttaaattaat ttgtacctcg gccgctctag aactagctgg atcccccgga n 231

<210> 716
<211> 215
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 25, 34, 35, 37, 80, 140, 146, 160, 168, 170, 180, 189,
198, 199
<223> n = A,T,C or G

<400> 716
cgataaccgt cgaccctcga gnggnggggg cccnngntac cccagctttt tgtttccctt 60
ttaagtggag gggttaaatn tggcgcgctt tgggccgtaa atcatggggc ataagcctgg 120
ttttcctgtt gtggaaaatn tgtgtnttca cgctcacaan tttccacncn acataccgan 180
cccgggaanc cattaaannt gtaaaagcct ggggg 215

<210> 717
<211> 686
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 158, 168, 260, 299, 320, 439, 475, 561, 573, 602, 627,
636, 640, 641, 673, 679
<223> n = A,T,C or G

<400> 717
gcggnggcgg ccgaggtact ctccaagctg ctcaaaaagc tcacaatttt gtttgattaa 60
attctgaggc tcttccacaa gaggtttaaa ttcatcgaac actttggcat agcattcatg 120
aggatctgca gcggcacagc acttctctag agtggttnca tatgtctngg caagtctcag 180
cagcagcacg acagagtaat caggatgcct tcttgcatat tcatacaaaa acatgcccag 240
gaagacatcc tttgcctcan catagttttt gcaaacatcc ttactttcaa caaaatcanc 300
agctaatgaa ggcaagtcan caggcatctc atcattttcc acttcggcaa tgcagtggga 360
tttttccaac agaggttttt cacagcattc cttcagtttt actggagatc gaatcttgat 420
tttcacagat atacttggna aggtccgcct ataagtaagt tggtggaaat tgttnaacac 480
ctaattgaca tttgctacac tttctccttt agacctttta tttaagttgg gcgggaacat 540
attccttttg ttttccccca nattacctgg ccncggggcc ggggcgcttc taaaaaacta 600
gntggggatc ccccccgggc ctgcagngga atttcnaatn ntcaaaagcg tttattcgat 660
tcccggccga ccntcccang gggggg 686

<210> 718
<211> 473
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 324, 358, 369, 396, 416, 419
<223> n = A,T,C or G

<400> 718
aggtacgcgg gggacatttt ctcggccctg ccagcccccca ggaggaaggt gggtctgaat 60
ctagcaccat gacggaacta gagacagcca tgggcatgat catagacgtc ttttcccgat 120
attcgggcag cgagggcagc acgcagaccc tgaccaaggg ggagctcaag gtgctgatgg 180
agaaggagct accaggcttc ctgcagagtg gaaaagacaa ggatgccgtg ggataaattg 240
ctcaaggacc tggaccgcca atggagatgc ccaggttgga cttcagtgaa gttcattcgt 300
gttcgtggct tgcaaatcac cgtntgccct gtcacaaagt accctggccc gggcgggncc 360
gcttcttana acctagttgg gaatcccccc cggggnctgc aagggaaatt tcgaantant 420
caaagccttt attcgaatac ccgttcgaac ccttttgaag gggggggggc ccc 473

<210> 719
<211> 697
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 487, 499, 598, 628, 631, 649, 671, 675, 685

<223> n = A,T,C or G

<400> 719
ggcgaattgg agctccccgc ggtggcggcc gaggtacacg ggggtggctg catgccagcc 60
agacacccag tcttgcaaga ctgtcattga aaatctccgt tttgctgttc tccgggtctc 120
tgcgtccagt ctttgtgttt ggacggacct gccgggccat ctttctgcaa gaagataaag 180
gaagaccagg agtgcctgcc gaactcctat ggaggaagtc taggagagga aggggacagg 240
gaggaagatg gtgtctgcaa accaggaagc agccttgcca gacacaggat tggccacaac 300
cttgacccca gacttccagc ctccagaact gtgagaaata aatgtccata ttgactaggg 360
gcacagggca tgggggaact ggttccagac ctgcctcctg gggaagtttg ggaggggggc 420
atttcaacct gttaatttct caaattatgt agtcattcca aaaagaaata gaaaccacct 480
tcatttnact ttgtgattng ccaaaattat ttggatcaaa tttcttcata agaaaaggtt 540
ataaccattt ttcccccttt tttgggtacc ctgccccggg gcggggccgc tttttagnaa 600
actaagtggg attccccccc ggggctgnga nggaatttcc gattattcna agccttaatc 660
tgattacccg ntccnacccc tcgangggg ggggccc 697

<210> 720
<211> 687
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 442, 460, 472, 508, 515, 534, 535, 549, 592, 601, 609, 611, 620, 637, 646, 653, 660, 663, 672
<223> n = A,T,C or G

<400> 720
ccgcggtggc ggccgcccgg gcaggtactt tttttttttt tttttttttt ggtttaaaat 60
ttctggcagg tagagcaggt gccctccccc agacacttgc aaaaatgtag agagaggtgg 120
agggctgggg tgcctgcgag caggtcccag ttgcaagaat taaagccttg caacaggttg 180
ggggaagcag ggcagcgcca ggtgcacgca gtgagcggag gccggagaaa ccctcaagcc 240
tgagcgggtc agaattatag gggaaaaaaa gccacaaaat tgttcacccc caagcaacca 300
ccgaaataat gagatcggat gcagtggaga tggcgttggg ggtgggagag aaaaatggat 360
ttatctttaa aatttttgct taaaatctaa aatacacccc cgctttttaa ccctcaactt 420
ccagcggtgc gcggcgccgc anaacaggta agaggcgttn gcttgcagcc cnagagggtg 480
ggagaaaatg ttgaaattca agaatttnaa aaacnaaaaa ccaaaaaccc aaannaaccc 540
ccaaacccnt taaacacctt ttttttttcc acttttggcc accttctttt tncgaaaatt 600
ntcaggttnt ncgccaaaan ttccgggaaa aaggggngaa aaaacnggag ggnggggttn 660
ttnaaaaagg gngccaaaaa aaagggg 687

<210> 721
<211> 530
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 308, 326, 353, 455, 459, 465, 522
<223> n = A,T,C or G

<400> 721
ccgggcaggt accaacagcc ccttccctcc caagttaggt gagcccttgg gccagtgtat 60
gggcagaaaa gcagatttgt gtccttcaaa agggaaatgt aaaaaaggtg aaagctctag 120
ttgaagggca gtgagagggg ctggagtggg agagaaggtc tctcctggcc ggtggtctgg 180
gtgcagcaag ggcactctga gaaggcagaa tggaaacgca gggctggagg ggccatgggc 240
acaggtttgg gggctccttc cagcctctac tatgttgccc ccttccccaa agcccttaca 300
ggggccanaa gccacattcc cccgtngacc ctgagtcttg gcctcatttt ggngaaagtc 360
cttctggggg tgtattggga tgcctgtgtg ttgttgagtg gaagatgggt tgggggggc 420

caacgggctt atcttgggct tcttagcaca cttcnatgng ggaanaaccc aagcctcttt 480
ggggaaacaa acaagggatt ggggggtgc cttgggggaa tngggggtt 530

<210> 722
<211> 294
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 28, 30, 35, 38, 41, 44, 66, 72, 78, 81, 86, 92, 93, 108,
110, 139, 141, 142, 149, 163, 164, 168, 177, 178, 179, 190,
196, 207, 209, 219, 222, 233, 245, 247, 249, 251, 253, 255,
259, 264, 271, 286
<223> n = A,T,C or G

<400> 722
ggaattcaaa attaacatnc ttgtccgngn gcttnttnta nacnccaaaa aaagtttcaa 60
ccttgngttc cncattgntc ngctgngctt tnnccaaaag aacctttntn agccggttgc 120
caccatcagg aggaaaganc nnaaggggnt ttattttttt gcnnaggngg tccattnnnt 180
tttaaaaagn ccccgnggga ccttggncng ctttaaaant angggatccc ccnggctgga 240
ggaantntna nantnaaanc ttanttggat ncccgtcgaa cctttngggg gggg 294

<210> 723
<211> 494
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 276, 329, 337, 356, 360, 363, 369, 399, 426, 444, 469
<223> n = A,T,C or G

<400> 723
tcagtccttc cttttataag gacaataatt ggagtagttt aatcttattc atgtgcagat 60
aaaagaggtt tatgaagttt agggtgaagt aggcaaggga atctgtttac tccctcttcc 120
ctctactgaa taattttccc tctactgaat aattttccct ctaagaattg ctgtgggtaa 180
taccaggagt ggggacattg cccacatgca taagagcgta tctctccatt cgatcagttt 240
gtcaccatct ttgctctgtt ttgaaagtca ggcttntctg tgactgtgaa gccctgctgt 300
tccctgaaaa tctgataaat ggagcagcng gagggtnttt ttctttctgg gctctngtan 360
aanctcatnt ggtgttgcaa ctttggtaat tttcccaana gtttgaaaaa gggaaagaat 420
tggaanctgg gaataattgg tgtnaaacct attcttggcc ttaacattna gtggtagcca 480
ttttttgcaa attt 494

<210> 724
<211> 641
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 111, 141, 151, 153, 173, 209, 295, 299, 352, 358, 366,
413, 436, 462, 469, 474, 479, 485, 487, 493, 499, 513, 534,
556, 563, 581, 590, 598, 601, 611, 623, 630, 631
<223> n = A,T,C or G

<400> 724
gcatggagga atccacacca tgatccaatc acctgccact gggtccntcc ctggacacat 60
ggggattatg ggattataa ttcaagatga gaggagattt gggaagaccc nctacattat 120

tttgagacaa tggggaagct naaatgtgct nantcgaacc tattgggatt ttnaatttct 180
cgcccattct taccaaatgt tgattttgnt gggaggactt cacttgtaaa ccagccaaac 240
cccttgccta agggaaatgg gaagagtttt gtgccataag cttctggaga aaaantggna 300
attggtgggt gtttttctct gggggtccga ttgattccag gtaaccattg tncagaanag 360
aaaagntgcc caaacatgga ttttgcaatc aagccccttt gccccaaaaa atncccccca 420
aaaaaagggt ttctanttgg gaagaatttt gaatgggcca angaaaagnc ccanaatanc 480
ttttnanggt ttnccaatna cttcggactt gtnacccttg ccccggggcg gggncggctt 540
tttagaaacc taagtnggga atncccccccg ggccttggca nggaaatttn caatattnaa 600
ngcctttttt nggatacccg tcngaccctn naaggggggg g 641

<210> 725
<211> 476
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 187, 192, 204, 322, 428, 434, 459, 462, 464
<223> n = A,T,C or G

<400> 725
gaattggagc tccacccgcg gtggcggccg cccgggcagg tacacaggat tgggtctaga 60
ccttgatgcc tgggtggagg gcccttgtaa ggggccatag cctcttcagg accaactgga 120
gggagagtta ggaaacacca gctcctgcct ggggcagtga gggaatggga gcagctgtgg 180
gcgcctnatt tnaggcaagt cctncccaaa ccttcagatg cagtgagacc tggccttcct 240
gttgtgcttt tcagactttg ttttcagaat gcttttatct cgagtgtgcc cttcggccct 300
cacaagagcc cctggggagt angtggtggc ctgtgccgtc atccccattt caaagcaggg 360
agctgaggtc ctgggagggg aaagtgcttg cctgaggtcc cactgtgtta gttgggtggg 420
caggactnga actnggttct tcaacaagcc cagaagctna antnttttaa cacccc 476

<210> 726
<211> 549
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 28, 30, 38, 57, 64, 104, 166, 310, 320, 332, 343, 375, 391, 397, 470
<223> n = A,T,C or G

<400> 726
accccaagtg tcanctccaa ctcttgtngn ggtctaanga aacctaggaa aagtggncat 60
cttntgttgt aaacatcctg aagcaaaaag aatgccctgt gcangaagac tatctatccg 120
tggtcctgaa ccagttatgt gtgttgcatg agaaaacgcc agtaangttg acagagtcac 180
caaatgctgc acagaatcct tggtgaacag gcgaccatgc ttttcaagct ctggaagttc 240
gatgaaacat tacgttccca aagagtttaa tgctgaaaca tttcaccctt tccatgccag 300
atatattgcn cccttttgn agaagggaga gnacaaaatc aangaaaaca aacctgcact 360
ttggtttgga gcctncgtga aaacaccaaa ngccccnagg gcaaccaaaa aggagccaac 420
cttggaaagc cttgttaatg ggattggatt tccgccagct tttttgttan aagaaagttg 480
cttgctaaag gcttggaccg attaagggag aaccctgctt ttggccccga gggaggggtt 540
aaaaaaaaa 549

<210> 727
<211> 226
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 39, 51, 61, 62, 64, 67, 69, 72, 80, 81, 87, 88, 89, 92, 97, 141, 212
<223> n = A,T,C or G

<400> 727
ttggagctcc ccgcggtggc ggccggcacc ttggccgcnt tcagagtgcc natgagctcc 60
nncnganang gnttccgccn naacaannna cnttttnccc caacgaagaa cttcctggag 120
ggcgccatgg cgctggagcc naggtgctta aggtcagtgt ctcccgcgta cctcggccgc 180
tctagaacta agtggatccc ccgggctgca angaattcca tatcaa 226

<210> 728
<211> 169
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 38, 39, 87, 90, 93, 122, 129, 153, 154, 156, 166
<223> n = A,T,C or G

<400> 728
ttagtgaggg tttaattgcg ccgccttggg cgttaatnna tggttcaata aggctgtttt 60
tcccctggtt gtgaaaaatt tgtttanttn ccncttccac aatttttcca caaccaaacc 120
antaccgang cccccgggga agccataaaa aanntngtta aaaaanccc 169

<210> 729
<211> 297
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 21, 26, 84, 246
<223> n = A,T,C or G

<400> 729
acccngctcc accgtggtgg ntgccncccg ggcaggtaca ctggtgattt ctcaagacaa 60
gaagataggc acttaatggc aacntgaaat tcctaatatt aagcctgata ttcttatcat 120
tgaatctact tatgggaccc atatccatga gaaacgtgaa gagcgagaag caagattctg 180
taacactgtc cacgatattg taaacagagg aggcaggggt ctcattcctg tctttgctct 240
tggaanggct caggagctgc tcttgattct agtatgaagt tacctcggcc gcttcta 297

<210> 730
<211> 261
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 32, 33, 37, 44, 110, 146, 166, 177, 185, 201, 206, 212, 214, 215, 230, 232, 233, 237, 244
<223> n = A,T,C or G

<400> 730
gaattccgat atcagagctt tatngatacc cnncagnccc tcgnaggggg ggggccccgg 60
gttccccagc ctttttgttc cctttaggtt gaggggttta attgccgcgn cttgggcgta 120
atcatggttc aataagcctg gttctncctg gtggtgaaaa ttttgnttaa ttcccgnctt 180
cacanatttt cccaccacca naccanttac cnannccccgg gggaagccan tnnaaangtg 240

gtanaaagcc cctgggggg t 261

<210> 731
<211> 356
<212> DNA
<213> Homo sapiens

<400> 731
aggacgcggg ggcattgccg aagtggaaaa tgatgagatg cctgctgact tgccttcatt 60
agctgctgat tttgttgaaa gtaaggatgt ttgcaaaaac tatgctgagg caaaggatgt 120
cttcctgggc atgtttttgt atgaatatgc aagaaggcat cctgattact ctgtcgtgct 180
gctgctgaga cttgccaaga catatgaaac cactctagag aagtgctgtg ccgctgcaga 240
tcctcatgaa tgctatgcca aagtgttcga tgaatttaaa cctcttgtgg aagagcctca 300
gaatttaatc aaacaaaatt gtgagctttt tgagcagctt ggagagtacc tgcccg 356

<210> 732
<211> 95
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 55, 61, 79, 81
<223> n = A,T,C or G

<400> 732
agctgtttcc tgtgtgaaaa ttggttatcc ggctcacaat ttccacacaa cattnccgaa 60
nccggggagg cattaaagng ntaaaaagcc ctggg 95

<210> 733
<211> 429
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 317, 361, 388
<223> n = A,T,C or G

<400> 733
cgaaaactga tcagactgtc tcagatcaag gaaaagatgg ccagagagaa gctggaagaa 60
atagattggg tgacatttgg ggttatattg aagaaggtta cgccacagag tgtgaatagt 120
ggaaaaacct tcagcatatg gaaactgaat gatcttcgtg acctgacaca atgtgtgtcc 180
ttgttcttat ttggagaagt tcacaaagcg ctctggaaga cggagcaggg gactgtccgt 240
agggatcctc aatgccaacc ccatgaagcc caaggatggt tcaaaggagg tgtgtttatc 300
tatccgatca tcctcanaag gtcttaatta tgggtgaagc tcttgacctg ggaacctgta 360
nagccaaaga agaagaatgg agagccgngc acccagactg tgaatttgcg tgactgtgag 420
tacctcggc 429

<210> 734
<211> 48
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 38, 41
<223> n = A,T,C or G

<400> 734
aggaaattcg atatcaagct ttatcgatac ccgtcganct ngaggggg 48

<210> 735
<211> 166
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 32, 45
<223> n = A,T,C or G

<400> 735
ccaccgcggt ggcggccgcc cgggcnggta cncgggggc accancactt ggagattttt 60
ccggagggga gaggattttc taagggcaca gagaatccat tttctacaca ttaacttgag 120
ctgctggagg gacactgctg gcaaacggag acctattttt gtacct 166

<210> 736
<211> 143
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 26, 30, 62, 74, 83, 84, 93, 134
<223> n = A,T,C or G

<400> 736
acccagcttn ttgttccctt ttaagnggan ggttaaattg cgcgccttgg cgtaatcatt 60
gngtcattag ctgnattccc tgnngttgaa aanttgttta tcccgctcac caatttccac 120
aacaaacaat accnagcccg ggg 143

<210> 737
<211> 573
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 55, 151, 155, 199, 228, 232, 252, 258, 260, 276, 296, 310,
332, 355, 370, 380, 405, 412, 460, 468, 479, 480, 483, 486,
487, 488, 514, 527, 545, 551, 553, 558
<223> n = A,T,C or G

<400> 737
gattgagccc tggcaggcat atgcatgcag cactgcctac acagtcctga gtcanaaact 60
tctcatgggg tctctgagtc tggaatgtct gagttctcag gaggggtagc atttgctgct 120
aaccctctgc ctccttagct tgagctgtct ntcgnggttt tttcccctga tggatgttaa 180
catcttccca acagagctnt caacccagtg agggaggagt ctgtgtanat cncctcccat 240
cattctccat anagtctntn tggcccaggt tagaanaaaa agacttcttg gctcanactc 300
caaagactan agtcagggac agtttcctta gnggtgtaaa atggcaagag tagcnctaat 360
ctcacagaan actcctgcan aacacactgg cacatttcaa ccatnaagct gntctcaaca 420
gtgtgaagcc tgggcaagca cttccccctt ttaatggttn gacctttnga aaaaatctnn 480
atntgnnnga gcccaaccag gggaaagacc cttnttgcat ttcattnccc tggactcctt 540
tcaanaaagc nangggcnaa aaccctttttt ttt 573

<210> 738
<211> 696

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 272, 302, 356, 382, 461, 477, 479, 483, 491, 514, 537, 554,
555, 580, 591, 605, 610, 611, 631, 651, 654, 664, 665, 670,
673, 681, 687
<223> n = A,T,C or G

<400> 738
gggcgaattg gagctccccg cggtggcggc cgcccgggca ggtacattgc agatcccaac 60
attgctaagc ttgttcactt tcagggttat ccatgtgaac ttttgcctct gacggtcgca 120
ggtattccat ctatgcacat ctgtctagat ttcatacctg agcttattgc acagccagaa 180
cttgagaaac agatatttgc tatccagttg ctttctcact tgtgtataca atatgcatta 240
ccaaagtcac ttagtgtggc tcgtttagct gncaatgtca tgggaacttt gttaacagtt 300
tnaacacagg ctaagcggta tgcttttttt atgccaactc tgccaagttt ggtctntttt 360
tgtcgagcat ttcctccatt gnatgaggat attatgtctt tgctgatcca aaaagggcaa 420
gtttgtgcct ctgatgttgc cactcagaca agagacattg ntccaattat tacacgntnt 480
tcnacaaata naaggagaaa ccaagtggga tggnctcaaa atctggtaaa gattcantct 540
ttataaaaat gganncaagg gacccctgga agcatgggan tccctgaatg naccctcggg 600
ccggntctan naactaaggg ggagcccccc nggcttgcaa ggaaattccg ntantcaaag 660
cttnntccan tanccgtggg naccttngga gggggg 696

<210> 739
<211> 377
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 362
<223> n = A,T,C or G

<400> 739
ccgggcaggt ncgcgggggc attgccgaag tggaaaatga tgagatgcct gctgacttgc 60
cttcattagc tgctgatttt gttgaaagta aggatgtttg caaaaactat gctgaggcaa 120
aggatgtctt cctgggcatg tttttgtatg aatatgcaag aaggcatcct gattactctg 180
tcgtgctgct gctgagactt gccaagacat atgaaaccac tctagagaag tgctgtgccg 240
ctgcagatcc tcatgaatgc tatgccaaag tgttcgatga atttaaacct cttgtggaag 300
agcctcagaa tttaatcaaa caaaaattgt gagctttttg agccagcttt ggagagtacc 360
tnggcgctct agaacta 377

<210> 740
<211> 344
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 56, 144, 177, 190, 235, 300, 301, 334
<223> n = A,T,C or G

<400> 740
gcccggtacc caagcttttg ttccctttag tggagggtta atttgccgcc gccttnggcg 60
taaattcatg ggtcattagc tggttttccc tgtggtggaa aatttggttt attcccgctt 120
caccaatttc ccaccaccaa ccantaccgg aagccccggg gaagccatta aaagttngta 180
aaaagccctn gggggtggcc ctaaatggag gtggagcctt aacctcacaa ttttnaattg 240
gcggtttgcc gcctcacctt ggcccccgcct tttcccaagt ccgggaaaac cctggtccgn 300

ngcccaagcc tgcaatttaa ttggaaattc gggnccaacc cccc 344

<210> 741
<211> 595
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 346, 505, 519, 533, 551, 575, 589
<223> n = A,T,C or G

<400> 741
gaagtggcgc ctctgagaaa agaaggttgg aattatcgta atttgtttct aggctgagat 60
accagcatgg agaaaatgtt ggagtgtgca ttcatagtct tgtggcttca gcttggctgg 120
ttgagtggag aagaccaggt gacgcagagt cccgaggccc tgagactcca ggagggagag 180
agtagcagtc tcaactgcag ttacacagtc agcggtttaa gagggctgtt ctggtatagg 240
caagatcctg ggaaaggccc tgaattcctc ttcaccctgt attcagctgg ggaagaaaag 300
gagaaagaaa ggctaaaagc cacattaaca aagaaggaaa gctttntgca catcacagcc 360
cctaaacctg aagactcagc cacttatctc tgtgctgtgc taggaaacaa tgccagactc 420
atgtttggag atggaactca gctggtgggt gaagcccaat atccagaagc ctgacccttg 480
ccgtgtacct tgccccgggg cgggncgctc taggaactng tgggatcccc ccnggcttgc 540
agggaatttc naatattcaa agccttattc cgatnacccg tcgaccctnc gaggg 595

<210> 742
<211> 158
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 8, 25, 31, 38, 46, 48, 59, 62, 65, 68, 72, 74, 77, 85,
94, 99, 100, 101, 107, 115, 118, 122, 123, 131, 136, 137,
145
<223> n = A,T,C or G

<400> 742
ccnggcangt acctgcacgc ctgcnacacc nacctctntc tgggcntnta ttacaaccna 60
anatnatntg gntntgnaag gcgcnagcca cttnttccnn naattgnccg atganaancc 120
cnngggctac nagcgnntcc tgaanatgca aaaccagc 158

<210> 743
<211> 173
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 22, 76, 88, 91, 102, 108, 114, 132, 140
<223> n = A,T,C or G

<400> 743
gccattagct tgaattcctn gngacgacaa ttgggtaata gcggctcaac agattttcct 60
acacgaacca ttactnagcc cttgggcngc nataaaaagt tngtctanag cctnttgggg 120
tgttggccct anatcggagn ttggaagcct aaaactccag caatttaaaa ttt 173

<210> 744
<211> 233
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 18, 24, 29, 33, 34, 42, 44, 64, 67, 87, 92, 95, 97, 106,
107, 115, 117, 127, 153, 155, 171, 175, 182, 189, 191, 196,
198, 199, 204, 226
<223> n = A,T,C or G

<400> 744
cgccggtggc cggccccngg tacnctggnt gcnncctact antngccata ttggcccgtg 60
gggnggnggg gggggactc aaaaaanaaa anaantnttt tttttnnttc cctgnangac 120
cactggnaag gtcaagctca gaatctatta ctnanagaat ttttccctgc ncatntatgg 180
tntccccanc nactcnanng attnactaat taatgtaact ttgttnaaaa aaa 233

<210> 745
<211> 154
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 55, 67, 127, 133
<223> n = A,T,C or G

<400> 745
ttgaaagagg aaaatctgtg gccaaattca aggcacccta ggctgtgatc ctngnactga 60
acatctngat gagtcaatac agggcacgga gtaggacttt gaagtcctcc attggatctt 120
ctcggangat ganggaaatg agagagtgtg gaga 154

<210> 746
<211> 578
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 281, 324, 456, 505
<223> n = A,T,C or G

<400> 746
tgcatagact agtcagcttc tggggtgact agagcagggc tgttgtctcc tcaagcttca 60
gccgtgcgtg gactggtcag cttccggagt gaccagagca gggctgttgt catctcactg 120
gcaccttggt tccatcgtag gatcagctgg gttgcatggt ctaggtcctg ttggctggtc 180
cacttgtcct gggctgctgg tttcagctga ctggatggat ggatccaagg cacaattcct 240
gcaacatttc taggcttcca agtgggtccc tggcgtctta nctgtgggat ctcccaatac 300
ctgcaggtaa acgaaggccc acangaagcc tgggccctct agggagccag gaaagacaca 360
gtagccagtt gaaagactac acccaagaag cctcccggct tgccgccaga agacaaaagg 420
ccccgccccc ccgcgttacc ttcggccgct tcttanaaac taagtgggga atcccccccg 480
gggcttcaag gaaatttccg aatantcaaa agccttattc cgaatacccc gtccgaccct 540
tcggaagggg gggggccccc cggtacccaa actttttt 578

<210> 747
<211> 620
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 68, 69, 70, 72, 73, 74, 76, 85, 87, 88, 89, 94, 95, 96, 102,
106, 118, 123, 124, 126, 140, 141, 145, 146, 148, 149, 153,
154, 157, 168, 169, 177, 178, 181, 188, 196, 197, 198, 201,
202, 205, 211, 217, 218, 226, 229, 232, 233, 234
<223> n = A,T,C or G

<221> misc_feature
<222> 235, 248, 258, 263, 273, 276, 278, 279, 291, 294, 301, 310,
312, 317, 335, 336, 337, 340, 341, 350, 357, 363, 364, 366,
382, 387, 388, 389, 390, 392, 401, 403, 404, 405, 412, 419,
422, 423, 426, 428, 429, 430, 432, 456, 464, 470, 471
<223> n = A,T,C or G

<221> misc_feature
<222> 485, 486, 487, 496, 502, 504, 505, 507, 508, 510, 512, 513,
516, 517, 518, 522, 535, 536, 541, 543, 553, 555, 557, 559,
564, 565, 579, 581, 584, 585, 586, 592, 604, 608, 610
<223> n = A,T,C or G

<400> 747
ttttttttt ttttttttt ttttttttt ttttttttt ttttttttt ttttttttt 60
ttttgggnnn cnnncnttta aaaancnnng ggcnnnaagg gntttnaagg gtttaaancc 120
aannanccca tttttttaan ntttnnannc ccnnggntta aaaaaacnna atttttnnaa 180
naattttngg gcaaannnac nnccnttttc naaaaanngt tttccnccng gnnnntttcc 240
gggcattnct tttcctgntt ttnaaagggc ttnttntnna aaaaaaaaac nttnccccac 300
natggattcn angggggntta attccccccc gcttnnnggn nccttgggtn gtccccnaaa 360
atnngngccc ccaaaaatcc cnggggnnnn tngggggtgg ntnnnntgggg gnaaaaatng 420
tnnttntnnn ancctaaaaa tcttttttttt aaaacntaaa gggnccccan ntttcttctg 480
gggannnaaa aaaaanccccc cncnnannan annaannngg gntttttta aaaannaaaa 540
nanaagggcc ccntntntna aaannttgca aaaaaaaang naannngggg gngcaaaatt 600
tccntttntn gggggggggg 620

<210> 748
<211> 597
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 20, 21, 26, 28, 30, 31, 40, 59, 65, 67, 71, 73, 77, 78,
81, 153, 159, 160, 166, 168, 201, 226, 234, 246, 256, 257,
272, 278, 287, 293, 297, 302, 307, 328, 329, 330, 333, 339,
342, 343, 345, 347, 349, 359, 361, 362, 365, 368, 371
<223> n = A,T,C or G

<221> misc_feature
<222> 374, 375, 376, 382, 384, 386, 389, 396, 400, 406, 413, 414,
416, 437, 438, 448, 461, 463, 474, 488, 509, 519, 531, 534,
537, 541, 543, 544, 545, 546, 548, 557, 559, 574, 576, 579,
580, 581, 583, 591
<223> n = A,T,C or G

<400> 748
tcncctttac ttggaaggcn nccctngngn nggacccatn catgattcag atcaccagna 60
agggngncct ncnctcnntt ntggacatgc atgtcaacgt tggtgggaga agctatgtgc 120
cgggaaaaat gaaaggcaga aaggccagga ggnctgtann gccctnanac atggccaaga 180
aaactttcaa ccccatccaa nccattgtgg acaacatgga atgtgnaacc aaantccaaa 240
acaaanccat gatttnncct gctccattgg gngacccnac ttgtgcnttc ggnaacnctg 300
gncatancag gaacctcgtg gaaatttnnn ccncgtctnt tnnantnant gcccctgana 360

nnacngtngc natnnntatc tncngngcnt ttgccncccn attccnttcg ggnntnttct 420
tattcccaaa tccgggnnag ggaagaantt ggctttcttt ntntacccac ttgntccctg 480
gagggcancc cccttaaga aagctttang ggaacgttna tttctttgac ncangtnggg 540
ntnnnnancc caatgcntnt ttgaaccctt tttngnttnn ncntgtggtt ngggccc 597

<210> 749
<211> 673
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 17, 27, 63, 217, 221, 268, 299, 333, 347, 351, 410, 413,
451, 453, 458, 463, 468, 470, 485, 490, 514, 535, 576, 583,
597, 607, 627, 642, 661
<223> n = A,T,C or G

<400> 749
aggtacgcgg gatnganagg ttgaccntgt gataccgcgg gacagttcac atagacatca 60
ganaatttat tccagaaagg agcctcctga atgtgatgaa tacggcaaag cctttaatca 120
catctcagcc cttagcatcg gaaagcttat actgtaaata aacttgatga atattatatg 180
tgaggaaaac tttcatgtat agcactcatt gcttcanaca naaaatgaat tccgtcggta 240
tgttccaatc tgtgatgaaa ttttgagnaa acattgccaa ggagggagct caatcttgng 300
ccgggcgcag ttgggcttca cgccttgtaa tcngcagcca ctttggngag ngcccgaggg 360
catggcggga tcaccggagg tcaagtttgt ttcggaagga cccagccctn ggnccaacaa 420
tgggtggaaa cccttgtctt cttacttgtg nanacaanga ttnatgtnan aacattattt 480
ataangggtn ccctgccccg ggggccgggc ccgnttctta aaaaaacctt aggtngggaa 540
ttcccccccc gggggccttg gcaagggaaa tttccnaatt ttntccaaag gcctttnttt 600
cggaatnccc cgttccgaac ccctccnaag gggggggggg gnccccccggg ttcccccaaa 660
nctttttttg ggt 673

<210> 750
<211> 591
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 36, 38, 40, 44, 49, 51, 54, 67, 73, 76, 79, 81, 88, 89,
93, 96, 98, 103, 113, 124, 125, 131, 137, 140, 148, 151,
152, 159, 160, 161, 165, 166, 171, 174, 177, 184, 190, 191,
202, 203, 207, 209, 213, 215, 217, 223, 227, 229, 237
<223> n = A,T,C or G

<221> misc_feature
<222> 243, 263, 269, 276, 283, 290, 293, 298, 307, 313, 316, 317,
320, 323, 326, 333, 345, 352, 358, 371, 372, 373, 375, 377,
382, 387, 388, 390, 394, 395, 405, 406, 407, 411, 415, 416,
427, 442, 450, 455, 456, 470, 472, 498, 510, 513, 527
<223> n = A,T,C or G

<221> misc_feature
<222> 531, 532, 536, 539, 545, 546, 550, 564, 565, 573, 575, 580,
581
<223> n = A,T,C or G

<400> 750
tttttttttt ttttttttnt ttttccccaa caaaancngn ttgnttttnt ngcngggaac 60
ctgggangga atnggncanc nggggtnnc cgnagnancc ccntcccccg gcntgactgc 120

caanncccag ntttgtntgn aacccagngg nnggatcann ntccnncccc nttnggncca 180
tccngggggn ngggggggacc annccccntnt ttntnanggc cangggngna aacagtnttt 240
ccngtttttt taagggttgc aancaaagng cccatnctgg gcnaaaattn aangcaancc 300
tttttgnggg gcnggnnaan gtnatnctta acnccccccaa gcttnttggg gncccganaa 360
acagtttaaa nnnancntcc anaggtnntn tccnnaaaaa actcnnnctt nggcnnaact 420
gaggcancgg cgtttttggc cnctttttttn gcggnngttt aaaaaaaacn cnttttttttc 480
cccgggtacc ttggggcngg ttttaaaaan ttngggggga tcccccnggg nntggnggna 540
attcnntttn aaaggttttt tggnnccccc gcnancctgn nggggggggg c 591

<210> 751
<211> 461
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 215, 237, 243, 247, 264, 270, 283, 295, 305, 312, 316, 319,
377, 382, 384, 390, 395, 398, 406, 435, 446, 449
<223> n = A,T,C or G

<400> 751
aggtacaaca ttggtgtcct aagacacctt caggtcatct ttggtcattt agctgcttct 60
cgactgcaat actatgtgcc cagaggattt tggaaacagt tcaggctttg gggtgagcct 120
gttaatctgc gtgaacaaca cgatgcttta agaatttttt aattcattgg tgggatagtt 180
taagatgaag cctttaaaag cttttaggga catcncaggc tatgctaagg taaaagntct 240
tanggangg t ttccttttgc ctgnatcagn aaggaatctt gcncataggg cttgncccca 300
cattnggtac cntgcnccng gggggccgggc ccgcctctta agaaacctta ggttggggat 360
tccccccccc ggggccnggc cnanggaaan tttcnggnat tattcnaaaa gcctttaatt 420
ccgggattac cccgntcctg aacccnttng gaaggggggg g 461

<210> 752
<211> 157
<212> DNA
<213> Homo sapiens

<400> 752
ccgggcaggt accacctcaa catttccttg tgctgaagct atactgagga ctgtcctacc 60
ttcactatca atactatcca cagctgcacc ccaaaacaaa agtgtattta caactgatgc 120
atgacccata gacgctgctg ctaagagggg tgtacct 157

<210> 753
<211> 271
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 67, 88, 111, 132, 153, 190, 206, 216
<223> n = A,T,C or G

<400> 753
gttaaattgc cgccgctttg gcgttaaatc atggggcata agctggtttc ctgtggtgga 60
aaaattngtt aatcccgctt caacaaantt ttcccacaac aaaaccatta ncgaagcccc 120
ggggaaggcc antaaaaagt ggttaaaaag ccncttgggg gggttggccc ctaaattgga 180
agttgaaagn cctaaacctt caacanttta aatttngccg tttgggggcc ttcaacctgg 240
gccccggcttt ttcccaaagt tcggggggaa a 271

<210> 754
<211> 484

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 376, 414, 437, 475
<223> n = A,T,C or G

<400> 754
tccaccgcgg tggcggccgc ccgggcaggt acgcgggggc attgccgaag tggaaaatga 60
tgagatgcct gctgacttgc cttcattagc tgctgatttt gttgaaagta aggatgtttg 120
caaaaactat gctgaggcaa aggatgtctt cctgggcatg tttttgtatg aatatgcaag 180
aaggcatcct gattactctg tcgtgctgct gctgagactt gccaagacat atgaaaccac 240
tctagagaag tgctgtgccg ctgcagatcc tcatgaatgc tatgccaaag tgttccgatg 300
aatttaaacc tcttgtggaa gagcctcaaa atttaatcaa acaaaattgt gaagcttttt 360
tgagcagctt gggagnagta cctcggcccg ctctaagaac ctagtgggaa tccncccggg 420
gcctgcaagg gaatttncga tatcaaagct ttatcgaata cccggtcgac cctcnaaggg 480
gggg 484

<210> 755
<211> 469
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 22, 25, 38, 75, 88, 91, 103, 128, 135, 175, 214, 216,
217, 220, 231, 238, 239, 241, 270, 311, 324, 336, 350, 371,
378, 406, 407, 415, 454
<223> n = A,T,C or G

<400> 755
ttccaaggcc ctgnggggaa anttnttatt aattcaantg acaaaatttg tgttaaagtg 60
gccttctttt aaggnacaga caatagtnaa naccttgact cangaggctg tcttccttgg 120
ggagactntt ggcanaacat gagcattgac cagaatttca aagggaaagg ggcanggacc 180
gggggctct taaataaaag aagggggagg gttnannttn gtttaattgg ngccattnnt 240
ncagggaagg ggttgaaaga ataaccttcn ccccccaggg gggtcctcca agggaaaggg 300
gcttgggggg ngcctttttgg ttanaaaaac cttgangaat ggtggccaan ggaagaagaa 360
accattcttt nttaaaanaa atgggccatt gcctttgggg cttggnnccg ccaanttggg 420
gccttcaacc acccccttggt aaaattcccc aagntgttgt ttccccggg 469

<210> 756
<211> 567
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 18, 34, 192, 281, 336, 356, 411, 450, 456, 491, 499, 518,
526, 531, 536, 542, 554
<223> n = A,T,C or G

<400> 756
ttgacctgct aatcaagnca cacatggtga gcgnggactt tccggaaatg atggcagaga 60
tcatctctgt gcaagtgccc aagatccttt ctgggaaagt caagcccatc tatttccaca 120
cccagtgaag cattggaaac cctatttccc caccccagct catgcccccct ttcagatgtc 180
ttctgcctgt tntaactatg cactactcct ctgcagtgcc ttggggaatt tcctctattg 240
atgtcctcgg ccgcccgggc aggtaccccg ggggacagat nctattatta tttccattct 300
accgagaagg agactaaggc tctgatcatt taaatnagtt gcctaaggtg atgcantgat 360

ataagtagca gagctaggaa ttgagccttg gtaactttaa ctctggaccc naagtcctta 420
gctactaagc ttttactgca tggggttttn agtcanaatt aaaaaacttt tttggaatat 480
ggagggtaac ntttttggng aattagcctt ttggtggnta attttntttg ngcctnattt 540
gncccaacaa aagnctaatt tttattt 567

<210> 757
<211> 229
<212> DNA
<213> Homo sapiens

<400> 757
accagccttt gggaagtcgt gtgaatacct cggtctctta gccacaggga tagaatggcg 60
gcctgacgga gccgcggcgc cggcgaagtc gctgaggcgc gagctggaac ccccagacca 120
gctcaaacgg gagccaaaac tcgaagcttg gaagaattag caggaaatgg cggatgaggc 180
gttgtttttg cttctccata acgagatggt gtctggagtg tacctcggc 229

<210> 758
<211> 60
<212> DNA
<213> Homo sapiens

<400> 758
cgcgcttggc cgtaatcatg ggtcataagc tgtttcctgt ggtgaaaaat tggttatccc 60

<210> 759
<211> 402
<212> DNA
<213> Homo sapiens

<400> 759
accatagttg aagtcttcaa caatcccatt aaacttcaag cagaatggcc tccacttctc 60
tttggctgat tctgacttga gttcttctgg gtccaacaca tctatcctaa gggtctcaaa 120
atttttccgg aactcagagt aaatttggtc atctactttg gtgagtttca ggaactgtgg 180
gtcaactgat gaaatcagct tgtaatagac ttcagcatgc tgcattgctc tcatggccca 240
agccatctca atgtcaggat cgttgccata cgactctgct gggagagaaa gcgcatgtgc 300
cacagacacc aactccccgg aaaccggctc atcagttcca ctggtggccg ccatcttgca 360
acccccgaaa gcgtggctcc ttccgcagct gattgcccgc gt 402

<210> 760
<211> 352
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 50, 53, 74, 84, 121, 123, 170, 173, 189, 198, 215, 227, 248,
283, 284, 291, 314, 316, 318, 326, 327, 331, 340, 347
<223> n = A,T,C or G

<400> 760
cgggctgcag gaatttcgat atcaagcctt attcgatacc gtcgaccctn gangggggg 60
ccccggtacc ccanctttt gttnccttt agttgagggg ttaattgcgc gctttggcgt 120
nantcaatgg ggcatagctg gtttcctgtg tgaaaaattg gttattccgn tcncaatttc 180
cacaacaanc atacgagncc gggagcataa aagtngtaaa agccctnggg gtggccttaa 240
tgaggggngc cttactcaca attaaatttg gggttggggc ttnntgcccc nctttttcaa 300
gtccgggaaa accntntncg tgcccnncct ngcatttaan tgaattnggg ca 352

<210> 761

<211> 462
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 365, 368, 432, 435
<223> n = A,T,C or G

<400> 761
tcgaggtact tgtgacaggc agacgtgatt gcagccacga acacgatgaa ctcactgaag 60
tccacctggg catctccatt ggcgtccagg tccttgagta atttatccac ggcatccttg 120
tcttttccac tctgcaggaa gcctggtagc tccttctcca tcagcacctt gagctccccc 180
ttggtcaggg tctgcgtgct gccctcgctg cccgaatatc gggaaaagac gtctatgatc 240
atgcccatgg ctgtctctag ttcccgtcat ggtgctagat tcaagaccca ccttcctcct 300
gggggctgg cagggcccga gaaaatgtcc cccgcgtacc ctgcccgggg cggcccgctt 360
cttanaanta gttggatccc ccgggctgca gggaaattcg gatatcaaag ctttatccga 420
tacccgtcga cnctngaggg gggggcccgg tacccaagct tt 462

<210> 762
<211> 339
<212> DNA
<213> Homo sapiens

<400> 762
aggtacttgt gacaggcaga cgtgattgca gccacgaaca cgatgaactc actgaagtcc 60
acctgggcat ctccattggc gtccaggtcc ttgagcaatt tatccacggc atccttgtct 120
tttccactct gcaggaagcc tggtagctcc ttctccatca gcaccttgag ctcccccttg 180
gtcagggtct gcgtgctgcc ctcgctgccc gaatatcggg aaaagacgtc tatgatcatg 240
cccatggctg tctctagttc cgtcatggtg ctagattcag acccaccttc ctcctggggg 300
gctggcaggg cccgagaaaa atccccgcgt acctgcccg 339

<210> 763
<211> 196
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 139, 149, 151, 155, 164, 166, 170
<223> n = A,T,C or G

<400> 763
attgggtatc ccggtcacaa ttccacacaa cataccgagc ccgggangca taaaagtggt 60
aaaagcctgg ggtgcctaat gaagtgagct aaactcacat taatttgcgt tggcgcttaa 120
ctgcccgctt ttcaaggcng ggaaacctng nccgngccca cctngnattn aatgaatcgg 180
ggccaacccc ccgggg 196

<210> 764
<211> 32
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 15, 22
<223> n = A,T,C or G

<400> 764

ancaccattc ttagnggagc angattcttg at 32

<210> 765
<211> 388
<212> DNA
<213> Homo sapiens

<400> 765
tccaccgcgg tggcgtccca gccactcagg aggctgaagt gggaggatcg cttgaggccg 60
ggattcgagg ctgcagtgag ttgtgatcat gccaccactg ctctctagcc tgggcaagag 120
tgagactccg actcaagaag agaaaaagaa aaaccttcca ggggcacatt tatttgtaaa 180
ccattccaga ggatagaaaa gagatgtaag gctccctaat tcattccata cggttagcgt 240
aatccttata gcaaactgca caaataaaac acaaggaaaa ctaaaccaaa ttcaattaat 300
gtaggtgcaa aaaatccaaa ataaaactag cagtttgaat tcagcattgt agcaaaagat 360
atatcatttt caaggaagat ttgtacct 388

<210> 766
<211> 106
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 37, 61, 65, 67, 68, 70, 74, 94
<223> n = A,T,C or G

<400> 766
accncggtgg cggcccgagg tacagtgtcc atgtgtntac ctgatacttt cacatgtcat 60
naaantnnan gcanccagac acaagtagcc atgnatcttg gcacat 106

<210> 767
<211> 66
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 19, 39
<223> n = A,T,C or G

<400> 767
ctcntatagg cgaatgganc tccccgcggt ggcggccgng tccttttttt tttttttttt 60
tttttt 66

<210> 768
<211> 398
<212> DNA
<213> Homo sapiens

<400> 768
cccttagcgt ggtcgcggcc gaggtactga tgggacagca gccagtgcca ccgtggccat 60
agcaggtatc catttccaat ggtataactt gtctgccttg gagcagcaca tttctgatgc 120
cctgggtcaa catttcagat tgtaatgaat gtcaaacaac tgttactgag attcttgtct 180
gatattccct acaccttttt tctagagagg agcatactcc agtattttga ttattctctt 240
cataaaggat gggatatgct catttcatct attcaaattt ttagattaac ttaagatagc 300
taaaaattta aatatctaaa atgctgccaa aataaaagag aaaacacatt tggctttact 360
ctctcaactt tgtatgtgag agagaacatt cctgtgtt 398

<210> 769

<211> 390
<212> DNA
<213> Homo sapiens

<400> 769
accacaatca caaatgcagc actgtttact gacaggacca ttactctgtc aaaatcagca 60
catcaaaaat attatcctgg aatctaaaat agtagtcaac tgggttgtta aagcaaggga 120
ttgctataga tctacaggac aaagttccat agtgaaacac aaactcctgg gttagtccta 180
ggccaggcag gtgaccataa atgttcacat tctggtagaa tcccattttc taaaaattat 240
acaaacacat cgaaatcact agattttata tatatataca cacacacaca cttatgtgta 300
tatatacata tacgtatttt gtgtgtgtgt gttgtgtttc cagcagctaa tagcagctaa 360
catttattga gcacttacca catgccagga 390

<210> 770
<211> 402
<212> DNA
<213> Homo sapiens

<400> 770
ccctttcgag cggccgcccg ggcaggtact cagctggctg catcacttat tttcctttca 60
gacctgtctc ctgtaggtag ccatgcttgt gtccccaaaa ctatactgtc ttcctaatct 120
tttcttccaa atgaaaatcg accacccaaa cccaaatttc ttaagcaggt tacaaaaatg 180
tttaaaccaa gttatatata aactgcagtc atattctcca gaaatacaaa ttaatatggc 240
atctagttta ctccctctct ttggacccca gttccacctt gctttcactc tcacaggctt 300
tctccttggc aaagcaaatt taagaatgaa actctataca caacctcttt tttcaatggt 360
gctactgtat tcccctcttc aagggttaga gagtttttct ac 402

<210> 771
<211> 426
<212> DNA
<213> Homo sapiens

<400> 771
ccctttcgag cggccgcccg ggcaggtaca cgtgtgcacg cacatgcaca tgaacacagg 60
aatgttctct ctcacataca aagttgagag agtaaagcca aatgtgtttt ctcttttatt 120
ttggcagcat tttagatatt taaattttta gctatcttaa gttaatctaa aaatttgaat 180
agatgaaatg agcatatccc atcctttatg aagagaataa tcaaaatact ggagtatgct 240
cctctctaga aaaaaggtgt agggaatatc agacaagaat ctcagtaaca gttgtttgac 300
attcattaca atctgaaatg ttgacccagg gcatcagaaa tgtgctgctc caaggcagac 360
aagttatacc attggaaatg gatacctgct atggccacgg tggcactggc tgctgtccca 420
tcagta 426

<210> 772
<211> 426
<212> DNA
<213> Homo sapiens

<400> 772
ccctttcgag cggccgcccg ggcaggtacc tatgaccatc ttacattatt tttatgggtg 60
gggggcattg actgtggaat gtgggcagta acttgcacag tcagtaaccg tttgagtaac 120
ttcttgttgg catccccatt ctggcactcc tcctctaggt ctccacctca cacgctggtt 180
tgtgggcgga ggggcaggtt ggtgcgtggg gtgtccgggc actggctgtg catgccttct 240
tcctcttctg tctcttggcc accttttcca aaaagtcacc agtgaccaat tctcccagtg 300
tttctttggg actcaatgcc ttgggcttgg cattgggtaa agccaactgg ccagtttcat 360
tctgacgagc tctatagtag tccggtgtgg acctctgccc tccctgctct gcggaagctt 420
cctcag 426

<210> 773
<211> 304

<212> DNA
<213> Homo sapiens

<400> 773
acgcgggagg ctgtaggaga acaatgaaag ggaggatgaa gagatgggta agtgagccat 60
actcaagggc acatggtgtt tcaaaaacac ctcccactat ttggctttta tccttgaaag 120
agagctcata agaaagtttc accaggccca ctgaagtaga aaagcataat aatatacttg 180
gtgagtaatc taacttcttt ttctccaaag gctagtaatc acctataaat taaaataaag 240
cacttaagtt ttatagcaaa aaacaaacaa actggcgatt ttcactaaaa ccaaaaaaaa 300
aaaa 304

<210> 774
<211> 359
<212> DNA
<213> Homo sapiens

<400> 774
ccctttgccg cccgggcagg taccatccct ctcctgagct agacaattat cctttgggta 60
gtgtgaaact gagtgtctct ggactcagga cagtgtgcaa acagtggggt taagacatag 120
gttcatgtat ttaattgaag actccctgct ttctctttcg gacttgtctc ccacacaata 180
gcagccagat gtttatctct aagcagcaac tggaattttc tctgtggtat ctgactagtc 240
taagaggaat aaaagaccaa agaagctggc attgtggctc cccaaggaaa tggcctaatc 300
cattattcta acagtggatg aacccctttc gtgtacctcg gccgcgacca cgctaaggg 359

<210> 775
<211> 418
<212> DNA
<213> Homo sapiens

<400> 775
ggtacctgtt acctgagtca acagatccag atgagaggtg taggcaggag ggtcatctct 60
gtgcatttag gaaaagcagc actgatgcta gtagagcatc cagttcccca acatgatcac 120
ccctgaagcc ttaattccca aatccttcca agccttatct gtaggggctt aatgaggaca 180
gaaaggaaga aacagtcact ctggcacaac aggacaatat attcagatta aatctgaaaa 240
tggtggaggc ctgctgccca tgaattctga gcctctccaa ccctggtccc ataatgaaac 300
tagtagtagg gtcttccaaa tggcattaga caagggttcc atctgtgtaa ggaccactgg 360
gagttagact ggacccagga tggtatgcca tgtgcagcca tgtcaacccc caatttgc 418

<210> 776
<211> 212
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 116, 157, 160, 163, 187, 189, 196
<223> n = A,T,C or G

<400> 776
acgcggggat ttaaaaaaaa aacaacacct atataaggga gtgatctacc ataataagat 60
aacagaaaca acaaatgaaa atattagtac cctctccctg aaaatttgag taatanatta 120
ttctgaagta ctgtacttca ttaaaaaaaa aaaaaanatn acnttccttg taaaattacc 180
gttgttntnt gtcccnccaa aaaaaaaaaa aa 212

<210> 777
<211> 415
<212> DNA
<213> Homo sapiens

<400> 777
cccttttcgag cggccgcccg ggcaggtacg cctcacccaa ctcaactctt cacatagctc 60
aagtcttggc ataaatgata tttctcaaga gatacatttt ctgaccactt tatccttgtc 120
tttccttcat aattaatcca taacattatg cttgttagct tccttcatgg tatatatcat 180
agattgtcat catatattaa tatgtttgtc tatagactgt ctctcatatt atattctacc 240
aatatgagtg cagcatccat ataccataga cctagcatgg tcttagataa ctaagatcaa 300
ataaatacaa aagttcaagg gcaaataata acgataataa ttaggattct caaaagcata 360
aaggtatgtt tttaaaactc tcaggtatta ataaaaatca atacccaaaa ttcta 415

<210> 778
<211> 305
<212> DNA
<213> Homo sapiens

<400> 778
acgcggggtc acctgctgtg ctcttgcttg cacagtgtcc tggagctgga cctggctctg 60
ggtttccagg aagcagtttg actaaaggca gcaagctgct tcctctgctg cctgagatac 120
cagattccca atggcgaaga ttgagaaaaa cgctcccacg atggaaaaaa gccagaactg 180
tttaacatca tggaagtaga tggagtccct acgttgatat tatcaaaaga atggtgggaa 240
aaagtatgta atttcaagcc aagcctgatg atcttattct ggcaacttac ccaaagtcag 300
gtacc 305

<210> 779
<211> 474
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 65, 130, 232, 290
<223> n = A,T,C or G

<400> 779
ngtacttata ggcaataagg cgagtctaag acctaaacta gataatttga gaacagggaa 60
aaaanattcc atttcgattc ctgaaggtta cccccatacc tattataaca gaataaaata 120
aaataattcn aaactgcaca acctctaact tatcaaatcc tatatatgcc tcatttctc 180
aaatgactcc taatttgtgt aaagaaaaag gcaaaaagag aaaggacaga antatgtcaa 240
ggtgggctaa agctatgaat acccttttat gtaaactaag aaaaaaatan atacacacgc 300
attttttaaa agggaacttt ttgaaacctt gagccgcaaa gaggaaaaat tcctggctaa 360
attgcaccac tcaaagacaa ctagacttac ggtcataaat ttcttctcca acccatttct 420
ttcaggattc ttacagatcc atagcatttt gcaagctgac ataggaccct ttca 474

<210> 780
<211> 338
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 310
<223> n = A,T,C or G

<400> 780
cccttttcgag cggccgcccg ggcaggtacg cgggtaaatc gaattaaact aaattaaaca 60
tttttctttc attagtaata ttaaaacact taaagctaca ttgagtgata gcaaattagt 120
aaagcctatt aagtcttcta tgtaaagtat gattcagaaa tatatatttt atatatatat 180
gcatgatctc ggctcaccgc aacctccgcc tcccaggttc aagcagttct cctgactcag 240
cctccctagt agctgggatt acaggcatgt gccactacgc ccggctaatt ttgtattttt 300
agtagagacn gggtttctcc atgttgttca ggctggtc 338

<210> 781
<211> 293
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 65, 79, 89, 182, 199, 204, 227, 245, 264, 265, 285
<223> n = A,T,C or G

<400> 781
ncgcgggagg ccatctcgct ataggaaagg aaagtggaac agcattcatc ctcaacattt 60
ttacnaagac aaaatgaana ctggagtana agactgatca gtgcaggtgt agcataaaag 120
tgtaatcctg gaagatgtgg tgtgagaagg tagcacaagt gaagcagaga tacaggagat 180
anggaaggga agctggaanc agangtcact ggagggagag ggagatngac acattcaggg 240
ctacnaagca agttctatgt gatnngctca cctctcaatt gtggngaccc ctc 293

<210> 782
<211> 360
<212> DNA
<213> Homo sapiens

<400> 782
ccctttcgag cggccgcccg ggcaggtacc tcttattcca gagaagtggg gagcagagag 60
gaagatggag tggaaagggg cgagacaagg ccctcctgaa atacctcaac ccaaatcttc 120
aagaaatccc caagtcccca cagtgctttt tgtggatttt tgtggaaacc ggtaaaaggg 180
gctgatttgc tggccccagt gggtagaaaa cagagactgt caagagaaca gaagagaagg 240
cagaaagggg atggggaagt ggggttcgcc atgttcacga gctcctggag ccacagggcc 300
ccccaggaac aacagagctg agactgggtg gccttgtttc tggcccaatt ccctgggacc 360

<210> 783
<211> 670
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 201, 240, 242, 277, 331, 340, 343, 367, 370, 372, 376, 382,
399, 406, 407, 444, 451, 466, 468, 475, 477, 479, 495, 501,
505, 508, 519, 520, 524, 525, 533, 538, 544, 547, 552, 591,
606, 609, 628, 630, 634, 654
<223> n = A,T,C or G

<400> 783
ccctttcgag cggccgcccg ggcaggtacg cgggaatgat ttatttgagg gtttggtaca 60
tcttatacaa ccgtgaatac aatttgcatc taataatgtg acttcagtag tatcatgatt 120
tttgtccaaa ccttctcagt ctgggaaaca tttaaagaga ataatgacct tagagaagag 180
ctggatttct tttaagactt ntattcagat caggacacaa tcacgttcaa aattgacatn 240
ancatgtaac atggatttca gtgaagaaaa gtacttnaga atcaaatttt agaagagtgt 300
tttaaggttt agtggcccta atcaaaagga ngtcaaaaan ctntttttt ggttaatcca 360
ttagggnggn gngganccac cnggggtttt ggcctcttng gttttnnttt tgaaatttgg 420
cccagggggc tacctttggt ccanttttt ngggggaagg gaaatnanat tgggncncna 480
aaaacttttg ggggnaaaaa nttanaanaa atttttttnn tttnnctttt ggnaaagncc 540
tttnccnggc cnttttttta aaaaaaaaat tggcctttcc gatttttttt naaatttaaa 600
aatttnggnt ttttttttg gaaatttngn tttnaaaact tgggggttct tttnccccc 660
tttttttttt 670

<210> 784
<211> 317
<212> DNA
<213> Homo sapiens

<400> 784
aggtacgcgg gggacctgct gtgctcttgc ttgcacagtg tcctgggagc tggacctggc 60
tctgggtttc caggaagcag tttgactaaa ggcagcaagc tgcttcctct gctgcctgaa 120
ataccagatt cccaatggcg aagattgaga aaaacgctcc cacgatggaa aaaaagccag 180
aactgtttaa catcatggaa gtagatggag tccctacgtt gatattatca aaagaatggt 240
gggaaaaagt ctgtaatttc caagccaagc ctgatgatct tattctggca acttacccaa 300
agtcaggtac ctgcccg 317

<210> 785
<211> 398
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47
<223> n = A,T,C or G

<400> 785
tagctgtttc ctgtgatggt aaaaggaccg tccaccgcgg tggcggncgc ccgggcaggt 60
acgcgggaat gatttatttg agggtttggt acatcttata caaccgtgaa tacaatttgc 120
atctaataat gtgacttcag tagtatcatg atttttgtcc aaaccttctc agtctgggaa 180
acatttaaag agaataatga ccttagagaa gagctggatt tcttttaaga cttctattca 240
gatcaggaca caatcacgtt caaaattgac atagcatgta acatggattt cagtgaagaa 300
aagtacttca gaatcaaatt ttagaagagt gttttagggt ttagtggcct aatcaaaggg 360
agtccagaag ctatttttgg ataatacata ggaggtag 398

<210> 786
<211> 316
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 16, 63, 114, 310
<223> n = A,T,C or G

<400> 786
gcgcgtcntg gcggcntccg ccaactgatt gggcgaaccg tccaggtcca gcttgccgtg 60
cancaggctg agactggccg cattcgcgcc gccgccgccc aggctgtcga acanattgcc 120
cgacaggccg gccgagaagc cgcggatcgt gtaattgctg ctggtggcgc cgtttgcctc 180
gttgtcgaaa cgcttgtcgt cataattgag ttgcagatac agattgcgca ggcgcgagcg 240
cagcagcggg tagctggcgt cgacgcccag cgtgttcgaa ctgcccttgg cgtgcaaggc 300
ggcaaattcn tcggcc 316

<210> 787
<211> 406
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 403
<223> n = A,T,C or G

<400> 787
acacgtgtgc acgcacatgc acatgaacac aggaatgttc tctctcacat acaaagttga 60
gagagtaaag ccaaatgtgt tttctctttt attttggcag cattttagat atttaaattt 120
ttagctatct taagttaatc taaaaatttg aatagatgaa atgagcatat cccatccttt 180
atgaagagaa taatcaaaat actggagtat gctcctctct agaaaaaagg tgtagggaat 240
atcagacaag aatctcagta acagttgttt gacattcatt acaatctgaa atgttgaccc 300
agggcatcag aaatgtgctg ctccaaggca gacaagttat accattggaa atggatacct 360
gctatggcca cggtggcact ggctgctgtc ccatcagtac ctnggc 406

<210> 788
<211> 321
<212> DNA
<213> Homo sapiens

<400> 788
aattggagct ccccgcggtg gcggccgagg tacgcggggg gccggagccg ggccgggcag 60
ctagcagggc gcttcggtct taggtatgtc tttatcagca gcataaaaac ggactaatac 120
aagtacacaa gaatacaaag aaaagaacag cagacactgg ggcccgcttg agggtagagg 180
atggaaggag gatgtggatc aaaagcctac ttatcaggta ttacgcttat tacctgggta 240
ttgaaataat ctgtatactg aacccctgca acacgcaatt tacccatata acaaacctgc 300
agacgtacct gcccgggcgg c 321

<210> 789
<211> 448
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 31, 32, 36, 37, 43, 44, 59, 60, 74, 79, 84, 85, 91, 103, 104, 121, 124, 127, 128, 134, 141, 142, 143, 145, 149, 150, 152, 153, 154, 157, 158, 161, 168, 178, 179, 180
<223> n = A,T,C or G

<400> 789
gattggagct ccccgcggtg gccggccgnc nngacnngta ctnnattcac gcctgcacnn 60
gtttaaagcc tgtnttatnt atanntgtcc ngtcatgggg ggnnctttga ctcttatgat 120
ncantgnnga aacntggatt nnntntccnn tnnnctnntg ntggggганat gctttctnnn 180
agtgacggca atggaaatat caagcaacca agggaaatct gaagatccca gagagcccag 240
caagcagcaa catcctcgag ttaggcaagc aagggcccgg agctggccag accatgggct 300
ggaatgcagt gggggccggt cagaggggct tcttctgggg tcctgactgt ggtttctgcc 360
agaggtggag caagttggaa ctggatgttg agtgaagttt caaagaactt aaaagtcaaa 420
tggggaacaa taatcaaagg cttccatt 448

<210> 790
<211> 316
<212> DNA
<213> Homo sapiens

<400> 790
cgaggtacgc gggacctgct gtgctcttgc ttgcacagtg tcctggagct ggacctggct 60
ctgggtttcc aggaagcagt ttgactaaag gcagcaagct gcttcctctg ctgcctgaga 120
taccagattc ccaatggcga agattgagaa aaacgctccc acgatggaaa aaaagccaga 180
actgtttaac atcatggaag tagatggagt ccctacgttg atattatcaa aagaatggtg 240
gggaaaagta tgtaatttcc aagccaagcc tgatgatctt attctggcaa cttacccaaa 300
gtcaggtacc tgcccg 316

<210> 791

<211> 332
<212> DNA
<213> Homo sapiens

<400> 791
aggtacatgg tctttgaact ctcgtgtcga aagagttgaa cacaactaaa ctttaatgtg 60
aaaaggtctc aagtagttaa tcagaaatga gaggcgcaca tagcatttta tactgttttc 120
gatttgctga cacaacatca ttctgtgctc tctagtgagc aagagtaatc ctcaatagca 180
ttaagacgaa aggctgaaca caaaaccgca ggcaagtcaa gtagtgattt tattcttttt 240
gtcatttttc tttcaagtgg aagatcccta acactctctg ctcctgacaa tgtttataaa 300
cagaactctg agaagcatct gaatgtaaaa aa 332

<210> 792
<211> 374
<212> DNA
<213> Homo sapiens

<400> 792
aattggagct ccccgcggtg gcggccgccc gggcaggtac gcgggtatta aatttccaat 60
gtgatgtggc ttctgtttgg atagagatgg agctggtcta tgtttcttta ctctgtgttc 120
atagtatcaa agtaagcttt gtatctgttt ttctgtaatg atgacattta cacttggttg 180
cattaatatg aagtaacatg gattgcgtgt gttagtaggt tctttttaat tactgtgtaa 240
aaataatatg taattgaaac aaaaagcatt gtttccaatc ctaatttttt ttcctcaagt 300
ccatcctgtc aagctgcaag cgtgaaagtt attttctggt ggtgtgatta gattggggct 360
gaaccctcca gctg 374

<210> 793
<211> 298
<212> DNA
<213> Homo sapiens

<400> 793
acctgacttt gggtaagttg ccagaataag atcatcaggc ttggcttgga aattacatac 60
tttttcccac cattcttttg ataatatcaa cgtagggact ccatctactt ccatgatgtt 120
aaacagttct ggcttttttt ccatcgtggg agccgttttt ctcaatcttc gccattggga 180
atctggtatc tcaggcagca gaggaagcag cttgctgcct ttagtcaaac tgcttcctgg 240
aaacccagag ccaggtccag ctccaggaca ctgtgcaagc aagagcacag caggtccc 298

<210> 794
<211> 349
<212> DNA
<213> Homo sapiens

<400> 794
aggtacctga ctttgggtaa gttgccagaa taagatcatc aggcttggct tggaaattac 60
atactttttc ccaccattct tttgataata tcaacgtagg gactccatct acttccatga 120
tgttaaacag ttctggcttt ttttccatcg tgggagcgtt tttctcaatc ttcgccattg 180
ggaatctggt atctcaggca gcagaggaag cagcttgctg cctttagtca aactgcttcc 240
tggaaaccca gagccaggtc cagctccagg acactgtgca agcaagagca cagcaggtcc 300
ccgcgtacct gcccgggcgg ccgctcggct ctagaactag tggatcccc 349

<210> 795
<211> 247
<212> DNA
<213> Homo sapiens

<400> 795
gattggagct ccccgcggtg gcggccgccc gggcaggtac acaaaacaga gatgcacaac 60
taccctacca cctgggcaag aaacgggctg ccacctggca tctagaagca gccctgtgac 120

cccaaccgct atactacacc cttcttcacc tccactgcta agttcataat cctttaatct 180
atcatcccca cgtgttgaag gcagctccct tcataattct tacattcaat tccaaaattc 240
tgaaact 247

<210> 796
<211> 142
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 796
ngattggagc tccccgcggt ggcggccgaa cgcgcggccc tggagttgcg tcgcgatgaa 60
gccgtacgcg cgctgcagga cgaagacaag cgctaccaga tcgtcaagga catcgccgat 120
gacctcaagg tcggctacaa ca 142

<210> 797
<211> 457
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 295, 327, 332, 335, 343, 443, 446
<223> n = A,T,C or G

<400> 797
ctgattggag ctccccgcgg tggcggccga ggtacttcta gaatccacag ctctgggagg 60
gctaccttaa attaacactg gcagttcttt gcaattaggg tgccataaaa gcagcacagt 120
tgactccaaa atggactgag ttttggaaag atgtctgcca gcaaaatcat atagactttc 180
ttgctgaagg gatgaaaaat taataatgcc ttgaagtata ttaatataaa aatatgtgac 240
caagcagtgt aattaattcc ccttttttcct caaaatgtag cctttttttt ttganatgga 300
gtttcactct gtcacccacg ctggagngca gnggngcgat ctnagctcac tgcaacctca 360
acctcctggg ttcaagcaat tctcctgcct cagcctccca agtagctggg actacaggtg 420
tgtgccccat tcccagctaa ttngtnggat ttttttt 457

<210> 798
<211> 421
<212> DNA
<213> Homo sapiens

<400> 798
agcgcatgta gtcgtagcgg tcggccgcca ggctgccgct ctgctccttg ttgcgcacga 60
tgaccgggcg caggaagatc atcaggttgg ttttcttgcg ctcgcgcgtc tggtacttga 120
acaggttgcc gatcagggga atgtcgccca ggccgcgcac tttctccgcg ttgtcgcccg 180
tggtgtcctc gatcaggcca cccaacacga tgatctgacc atcgtcggcc agcacattgt 240
tttcgatcac gcggttgttg atggtgatgc cgctgacggc cgacgcggtg gatttgtcca 300
cgctcgacgt ctcgtgatag atacccagct tgatcgtgcc gccctcggaa atctgcgggc 360
gcaccttcag ggtcaggccc acttccttgc ggtcgatggt ctggaacggg ttcgtattgg 420
t 421

<210> 799
<211> 416
<212> DNA
<213> Homo sapiens

<400> 799
cgaggtacgc gggtcttctc tcctccttat gccttttctt cttcctcctc accctcatgg 60
ctccaggtcc atgcccaggg agcatgttag catgttgtca ggtctcaaag tatctgaaaa 120
gattgtcttc tctgtggcca ggctgcttag aggcagcctg atataaactg taaaaagggg 180
gagagtgttt ctctgtgtcc tctgcatcca ctcttcatgc atttgctcca aaccaaatct 240
gctcttagga agggatcaga cgaacctgtt tagagtgagg tagcaatgat aggttagcag 300
tgggtaaacc acataaatga aactttaaat gaggaattcc accttgttaa agaagtaagg 360
tgggccaggc acagtggctc acgcctgtaa ttccagcact ttgggggccc aaggca 416

<210> 800
<211> 227
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 11, 140, 185, 192
<223> n = A,T,C or G

<400> 800
tgatccctna ngctccagcc ttcgggaaga tatgtctaca atgacctttg gccactgaca 60
aagaggaagt tatctggaag tttgcaaacc tctgttcaac tctctatcca cccсttggaa 120
ggaccttttc agaggaagan aacagagttt gtttttcaaa tcattttcac catatctaaa 180
actanccact cngcttggtg ataggacatc cctatgaaac acacatg 227

<210> 801
<211> 441
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 352
<223> n = A,T,C or G

<400> 801
cgtgagcctc gcggatgtgg ccagggagcc gtacattttc ctcaccgtcg acgaggccga 60
acaaagcgcc atgcgctact gggaacaggc cgggcaaacg cccaaggtgc ggctgcgcac 120
cagttcggtg gaggcggtgc gcagcatggt cgccaatggc agcggcgtgg caattctgtc 180
ggacctggtg catcgcccgt ggtcgctgga aggcaagcgc atcgaaaccg tgagcgtcac 240
cgacaaggtc acgcccatga gtgtcggcct ggcctggcac cgcgagcgcg acttcacccc 300
ggcgatgcag gcgtttcgtg attacttcca cgatgcattc ctggcgccgc ancagttgtc 360
ggcccggcgt taaagccggg attgcaggat cgccgccagc caatccatga acacccgcac 420
ccgctgcggc aaatgccgtt g 441

<210> 802
<211> 369
<212> DNA
<213> Homo sapiens

<400> 802
ttggagctcc accgcggtgg ccgagcggcc gcccgggcag gtactgggat gagaagctca 60
agtccctgtc ctcaaaaatt tactttctag cattgatgaa taatcagtct tcactattta 120
tgattaaaaa aactttgttc atcatatgct ttatttaaag attgataatc tgttctccca 180
ttacctggcc acttgctctt tgctctccta attacttctt aggaccttta gtagctttct 240
tgttttctga gtatggacgt tttccctcaa gtaagacact actagtcgct gggtgcggtg 300
gctcacgcct gtaatcccag cactttggga ggccaaggcg ggtggatcac ttgaggtcag 360
gagtttgag 369

<210> 803
<211> 209
<212> DNA
<213> Homo sapiens

<400> 803
actaccagga tggccgcacg ggcaacgcca agctgggcga catggtggcg ctgggcggcg 60
gcaagttcct cgtcatcgag cagggcgccg cgccgtcggg caaggtcttc aacaagctga 120
tgctggtcga actgaagggc gccacggaca ttgcggctgc cgctttcaat gcgacgacgt 180
ccgacctgga aaaaagcagc atgggcggc 209

<210> 804
<211> 355
<212> DNA
<213> Homo sapiens

<400> 804
ccgggcaggt actgggatga gaagctcaag tccctgtcct caaaaattta ctttctagca 60
ttgatgaata atcagtcttc actatttatg attaaaaaaa ctttgttcat catatgcttt 120
atttaaagat tgataatctg ttctcccatt acctggccac ttgctctttg ctctcctaat 180
tacttcttag gacctttagt agctttcttg ttttctgagt atggacgttt tccctcaagt 240
aagacactac tagtcgctgg gtgcggtggc tcacgcctgt aatcccagca ctttgggagg 300
ccaaggcggg tggatcactt gaggtcagga gtttgagacc agcctggcca acacg 355

<210> 805
<211> 466
<212> DNA
<213> Homo sapiens

<400> 805
aggtacaatg tgggactttg gtggaactgc ctgggagaac ttcataatta ctaccctgta 60
tgtcatgccc cttgcaggta aaacagaagt ggcagagcag aggtcaaagg cacagatcag 120
caaagggaat cctactggat cctgagacta gcctggaagg ggtgtcattt gtcactggga 180
atagaggtgc acggcctggt ggaccctccg agagagctta agattcattt ttaaaacaga 240
ggatttaaaa gacacaatag gcattggaat cgggtagtaa gaagagaaaa ccagagcccc 300
aagtgaggaa gtgggtgatc tgtcctcaca cagttggtgg gggagctggg cctccccact 360
gactggactc tcaggtcctt aggaggtgct ctgtcctgca caccccaaat gaccacctaa 420
attcaggcct gaagcagtaa gaagtacctg cccgggcggc cgctcg 466

<210> 806
<211> 457
<212> DNA
<213> Homo sapiens

<400> 806
gggcgaattg gagctccccg cggtggcggc cgaggtactc attggaggat cagctcacct 60
gctttgctct cgatgtagcc tagctgggtt tagagccttc ccttgaatga agaaccctcc 120
ccagctggaa ggggatgctc ttgaaagctc agctgacaac acacatgggc atcaagtcat 180
tggccacatt catgcctcaa gtgtcctaaa accgaatatg atcaaaagaa aactgctgtt 240
cagcaagtgg agactggcat gcagattccc tggcctgcaa gcctagtgta aaaagatacc 300
aaatactgct ggaagaatga aaaggatgaa gggatgtcat caaagtagtt ttttcacttg 360
atggaaaaga ctaaaacagc aaagcaagtt caagatcaaa cacaacacca cagggatcct 420
ttgatgagaa gtgaacttaa gaccatgaaa tgctgtt 457

<210> 807
<211> 314
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 9, 11, 12, 17, 18, 19, 20, 23, 24, 30, 34, 35, 37, 40,
44, 45, 48, 56, 61, 69, 82, 87, 89, 91, 95, 99, 109, 112,
122, 127, 133, 146
<223> n = A,T,C or G

<400> 807
atgtacannt nntgaannnn ccnncctgcn aganntnaan atannacnta taaatncctt 60
ngacctccng gggggccca tntcccncnt nctgnaccna ttcactgang gnaaattgcc 120
cnctcgngta atnatggtca tatctnttgc cgaccttctc acaccacatc ttccaggatt 180
acacttttat gctacacctg cactgatcag tcttctactc cagtcttcat tttgtcttcg 240
taaaaatgtt gaggatgaat gctgttccac tttcctttcc tatagcgaga tggcctgtcc 300
cgcgtacctg cccg 314

<210> 808
<211> 246
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 808
nattggagct ccccgcggtg gcggccgagg taccttattt acacccatgt gcagggcaag 60
gcaagctaga tatttgctgt tgttattggg gggcaagctc aagttcagaa atgggaagaa 120
agatgcaagg ggaagggcca tgtatctatt gtgcagggag gaatggctgc caattttcca 180
ggcatggtct cccatttccc acccaaagga ggaagccaac ctattcagaa gccaggtacc 240
tgcccg 246

<210> 809
<211> 156
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 3, 6, 7, 8, 9, 20, 21, 25, 29, 33, 34, 38, 44, 47, 50,
51, 53, 54, 55, 58, 64, 65, 68, 70, 71, 73, 75, 76, 77,
78, 79, 80, 86, 95, 97, 99, 101, 105, 108, 109, 111, 128,
131, 139, 140, 145, 149, 153
<223> n = A,T,C or G

<400> 809
tnnttnnnng tgaaaacccn nagtntcant gannatgntt tctngcngan nannnccntc 60
tatnnctncn ngngnnnnnn ctcctnggta acgcncnant ncacnagnnt ntatctccta 120
ctggctgnaa nactctccnn actcncccnc ctncct 156

<210> 810
<211> 537
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 453, 457, 471, 514
<223> n = A,T,C or G

<400> 810
acagtgtggc ctaaaacaga agaatgttta actgcatgaa ggcagggtgg tttgtattgc 60
tgggcttggt gtatatttct ttgctatcta gtttaatata ttgagcttta catctgtgcc 120
agccttgcat gtccatatac ctttggcagg catttctagt caggtggcat ggggcaaggg 180
gtgtgctacg ttttaagtcc ctcatttctc cagcctgtcc aggtagtgtc tacgtctcca 240
actcactcag gaaggcagga gacttccaga ttcactccac tggtatcaag agttaggttc 300
tggtgagaga gctggcagaa gcttcagagg accttgcgtc ttaacctcct cttttttttc 360
ctgtccttaa cagcaagttg ttgcctctaa ttttcaaaaa atcgcaacac atttccagga 420
gacctgaaat gcggtggact gcttcaacat tanattnttt ttggcagaca nggatagtat 480
ttagtgtaac gtcacctata tgcttatcaa atangggtaa ggggagtcat aattatt 537

<210> 811
<211> 482
<212> DNA
<213> Homo sapiens

<400> 811
ggagctccac ccgcggtggc ggccgccggg caggtacgcg ggatgtccct gaagtcctcc 60
aggcccacac ctccacccgc cttctgtcct gtatctgcgg aaatatttat tttctgtaat 120
gaactttctt ggggctccag acaccctctc agcctcttcc cacacagaac tttgcctaca 180
cattcctact accccctggaa ttctaactca gatgtgggta gcagcttcct caaagagaaa 240
cttttcccag ctgggtgctg tggctcacac ctgtaatccc agccctttgg gaggctggag 300
tgggcagatc gcttgagccc aggagtttga gatcagcctg ggcaacatgg tgaaactcca 360
tctctgtgaa aaatacaaaa attagccagg tgtggtggtg cgcgcctgta atcccagcta 420
ctagggaggc tgaggtggga ggattgcttg agcccaggag gttgaggctg caatgggctg 480
cg 482

<210> 812
<211> 340
<212> DNA
<213> Homo sapiens

<400> 812
ggagctcccc gcggtggcgg ccgaggtacg cggggacagg ccatctcgct ataggaaagg 60
aaagtggaac agcattcatc ctcaacattt ttacgaagac aaaatgaaga ctggagtaga 120
agactgatca gtgcaggtgt agcataaaag tgtaatcctg gaagatgtgg tgtgagaagg 180
tagcacaagt gaagcagaga tacaggagat agggaaggga agctggaagc agaggtcact 240
ggagggagag ggagatggac acattcaggg ctacaaagca agttctatgt gatttgctca 300
cctctcaatt gtgggacccc tcaaaatgtg tacctgcccg 340

<210> 813
<211> 226
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 54, 73, 155, 194
<223> n = A,T,C or G

<400> 813
aaaatggcca aataangagg gaaaggtaat agctttgctg tcgtgactac cacnatgaaa 60
ggatctggct cangccctca aggagggcat tcttccttgc gtagttattg agaatatggc 120
tttctagtta aagtctggct ctgcccctta agtcngcagg gtgaacacac caggcaaaag 180
aggtgtgtgt gaangcccac aagtaagggg agacacaccc tttccc 226

<210> 814
<211> 294

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 189, 191, 192, 213, 227
<223> n = A,T,C or G

<400> 814
gggcgaagcc gccatggtcg accacctgca caaagtaata caaatcgttc agatcctgca 60
tgccgcctcc ttgatcgttc tatttttgga acgctgatgg cgaattttac cgtctaccgc 120
ctctatcgtt gcaagagtat tctgactcca tcgtaatgca caccctacag gagatcgaga 180
tgaacacant nncaggtatc tacagcgcac ccngccagca ctgggtnggc gacggtttcc 240
ccgtgcgctc gatgttttcg tacaccggcc atggcaagca gctgagcccc ttcc 294

<210> 815
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 212, 215, 217, 219, 226, 247, 316, 321, 350, 374
<223> n = A,T,C or G

<400> 815
gctccccgcg gtggcggccg cccgggcagg tacacataca taaaagaaaa tggccaaata 60
aaaagggaaa ggtaatagct ttgctgtcgt gactaccacg atgaaaggat ctggctcaag 120
ccctcaagga gggcattctt ccttgcgtag ttattgagaa tatggctttc tagttaaagt 180
ctggctctgc cccttaagtc ggcagggtga anacncnang caaaangaag tgtgtgtgaa 240
agcccanaaa taaaggggga gacacaccct ttcacccttt caagcaaggc cttgatcctt 300
gctcccccac aaaagnttgt nacctggttc tgtcctctaa aacattccan gaaggtaaag 360
gctgcaagaa gaancctggt tctttgagct tccaaaaaaa aaagt 405

<210> 816
<211> 496
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 118, 246, 264
<223> n = A,T,C or G

<400> 816
ttggagctcn ccgcggtggc ggccgaaata ccgatattga cttccgtaat ggtcgcggcc 60
gccggcgtgt agtgcaattc cagcggcaag gtgtgggtgg ccgtggccat gccttgcnac 120
acggatacat acggccccaa gcagattgcc cgtcaacttg atcggctgca tcacgggacg 180
ggcggccttg ttcggcgagc tgaacttcgc ctgcgtcacc ttcaaaccct tgcacacgag 240
actcanttcc accgtcgtca cggnggccag ggcgctgtcg ccgatattcg tggcgctgac 300
attgccgccc aggctcaacg ccccatcctt ggtttgcttg ctgacatcga cgcattccgt 360
cctgacgatg ctgccctgcg tgtaatgcgt ctggttgacg gcgcccgtgg cggccaggtt 420
gacgccgggc agccccgtca cggcgtacga ccaggtatcg ttgtactggc tttgcgccgt 480
cgtgtaaacg gggtat 496

<210> 817
<211> 469
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 14, 27, 73, 80, 89, 96, 101, 103, 114, 299, 358
<223> n = A,T,C or G

<400> 817
tgggcttntt cgtngaccgt ttgcgcncgg gcctgaaccg cgacgcgcac cagctgctgg 60
gggccgacct ggncatcagn gccgaccanc ccgtcnatgc ngngtggcgc gccnaagcgc 120
acaagcgcgg ttttatcctg gccgacacgg tgacgtttcc cagcatggcg caggcgggcg 180
agggcgagca gtcgctgtcg cagctggcgt ccctcaaggc cgtctcgccc ggctacccgc 240
agcgggggcaa gctgaaaatc acgaccaaac tgaacgaagc gcaggatgcc gtgggccanc 300
cgaccagcca ggtaccggcg cccggcacct tgtgggtcga cgcggcgatt ttgtccancc 360
tgaacgcgaa actgggcgac accttgacct tgggcgacaa ggcatttacc gtcacgcaac 420
ttgatcccag tgagccggac cggggccgcc tcgttcctga acttccccc 469

<210> 818
<211> 452
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17
<223> n = A,T,C or G

<400> 818
ccgcggtggc ggccgangta ccaacatgct ttaccatgct gcaaaattta ggatcctgtg 60
gctgaaatat tttgtaagaa atgatgcatc ctgaatttat cattgaattt caagtcttga 120
aataagtaaa ttcacatttc cttgttttgg catagaagtg tttagctgat taaagttttt 180
ggcacttgtt ttgcatttcc tctgagaggg cactaatgta tgagagaagg taaaccgaac 240
cttctaaggg aaaggaaagt taaggaggca ggaaaagcat ctatagctct gttttcggga 300
tttaagagta taggttctgg aggcagactg ctcagcagac tggagccagg tcccaagtct 360
ggctttgcct gtcactagct gtgtgagctc tgccttagtg agtctcagct ttctcatctg 420
tcaaatggag gtgacgaggg ctgtggtgag ga 452

<210> 819
<211> 388
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 220, 233, 271, 321, 343
<223> n = A,T,C or G

<400> 819
tgcttgctat cgcgcaacgt cttgtcatgc tcggaagcca catgcaacag cccgccctgc 60
aaggccgctt ccatggcgtc gagcaccttg aaaaactgct ccgtcgcttc tttcgagacg 120
ggcgcgagct cctggcgcgg cttgcgcagt acaggtgcag gtccaggctc ggcatgggcc 180
gccgcggcct ctggcgctgc cgcctgcacg ggtgccggcn cgctggccaa canggccgaa 240
aattgctgct gcaagctgtc ggacaaactg nattcaggca ggcgcggcat ggcttgccac 300
gcgcgtttca tggcattcac nttgaggctg gcggcgtcct gcncctgcca ttccgccagt 360
gcggtctggc gcgcgtcgaa cactgact 388

<210> 820
<211> 416
<212> DNA
<213> Homo sapiens

<400> 820
gtgtccggat gcttctacag cacagcggag ctcgatcgaa agagggcagt cgggatcgtc 60
cagcctaacc ataaccgact ggtcggtggc acggttcagc tgaagctccg ctggcagatc 120
agcatcttgc tgctggcctt ggccgatacg gcgttgcata cctttctgtt ggtacacctg 180
caggacgtgg tcgagcagct ggtggccatc gctatcggcc gggaagagct ccatgaagct 240
cgtagcgtcg acttcgaacc gagggttgtc cttgttctgt tcctgcagtc tgcgctcgta 300
gtgggcctgc aggcggtcca gttcgcgcac tgcccacgcg caggcggagg aaaggctagt 360
tttggggcca gtcacaccgc ctccggtatt cggcaagtag gtgccaggcg actggt 416

<210> 821
<211> 300
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 269, 277
<223> n = A,T,C or G

<400> 821
cgaggtactt cctggcttgt tgagcgtgtc ctcactgctg gccctcttga gcctgctgag 60
tcgggactca aaagccaagg aagttgaaga cttagaactc ttcatgccgg aagaggctgc 120
aggcagaggc cgcacccggt ctgggccgtg gccccctgct ctgatggatg ggttccaggg 180
cttggctgca ctccgcatgc ttgacttcgt gggtctgtct gcaaaaactc tgcttctcct 240
gcttctcggg agctgccgac ctcaatcanc aagtcancca ctctcccgcg tacctgcccg 300

<210> 822
<211> 339
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 154, 167, 170, 176, 207
<223> n = A,T,C or G

<400> 822
gagctccccg cggtggcggc cgcccgggca ggtacgcggg gacctgctgt gctcttgctt 60
gcacagtgtc ctggagctgg acctggctct gggtttccag gaagcagttt gactaaaggc 120
agcaagctgc ttcctctgct gcctgagata ccanattccc aatggcnaan attganaaaa 180
acgctcccac gatggaaaaa aagccanaac tgtttaacat catggaagta gatggagtcc 240
ctacgttgat attatcaaaa gaatggtggg aaaaagtatg taatttccaa gccaagcctg 300
atgatcttat tctggcaact tacccaaagt caggtacct 339

<210> 823
<211> 351
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 34, 42, 46, 57, 58, 59, 65, 76, 79, 98, 106, 110, 111,
113, 114, 124, 131, 133, 137, 140, 141, 143, 146, 149, 152,
154, 155, 157, 167, 168, 169, 173
<223> n = A,T,C or G

<400> 823

gggcnaattg gagctccccg cggtggcggc cgangtacac gnggtntaac ctgctgnnnt 60
cttgnttgca cagtgnccng gatctggacc tggctctngg ttgggnggan ncnntccgac 120
taanggcacc ntnctgnttn ntntgntgnc tnanntncca tattccnnnt ggnaaatatt 180
gacaaaaacg ctcccacgat ggaaaaaaag ccagaactgt ttaacatcat ggaagtagat 240
ggagtcccta cgttgatatt atcaaaagaa tggtgggaaa aagtctgtaa tttccaagcc 300
aagcctgatg atcttattct ggcaacttac ccaaagtcag gtacctgccc g 351

<210> 824
<211> 320
<212> DNA
<213> Homo sapiens

<400> 824
aggtacgcgg ggacctcacc tgctgtgctc ttgcttgcac agtgtcctgg agctggacct 60
ggctctgggt ttccaggaag cagtttgact aaaggcagca agctgcttcc tctgctgcct 120
gaaataccag attcccaatg gcgaagattg agaaaaacgc tcccacgatg gaaaaaaagc 180
cagaactgtt taacatcatg gaagtagatg gagtccctac gttgatatta tcaaaagaat 240
ggtgggaaaa agtctgtaat ttccaagcca agcctgatga tcttattctg gcaacttacc 300
caaagtcagg tacctgcccg 320

<210> 825
<211> 317
<212> DNA
<213> Homo sapiens

<400> 825
aggtacctga ctttgggtaa gttgccagaa taagatcatc aggcttggct tggaaattac 60
atactttttc ccaccattct tttgataata tcaacgtagg gactccatct acttccatga 120
tgttaaacag ttctggcttt ttttccatcg tgggagcgtt tttctcaatc ttcgccattg 180
ggaatctggt atctcaggca gcagaggaag cagcttgctg cctttagtca aactgcttcc 240
tggaaaccca gagccaggtc cagctccagg acactgtgca agcaagagca cagcaggtga 300
ccccgcgtac ctgcccg 317

<210> 826
<211> 438
<212> DNA
<213> Homo sapiens

<400> 826
cccttagcgt ggtcgcggcc gaggtaccgc agtatggttg gccatgggat tatccttcat 60
tacatcaaat gaggtatggt ggacaatctt gtttataaca tcacctgaca aagttttctc 120
caagaattcc aacaccttgt ggatctcatg ttttggattt tttttaatat ccccgtagaa 180
gaggtagagg atccggtgcg tgtcttttgc agcccaccat cctttcacat ggtcaaacca 240
ggacctgcca acaacttttc cggacatgaa tttctcataa aattcctcta agttctgagg 300
atcaggcata aaggaagcca tcctgtgaaa gtggtagtag gacaccaggc aatccttggg 360
atttctggcc acatagacaa tcttgcagtt ttctttccag atagatggtg gaatcagatg 420
tgaagggaga tgtgtttt 438

<210> 827
<211> 410
<212> DNA
<213> Homo sapiens

<400> 827
ggtaccgcag tatggttggc catgggatta tccttcatta catcaaatga ggtatggtgg 60
acaatcttgt ttataacatc acctgaccaa gttttctcca agaattccaa caccttgtgg 120
atctcatgtt ttggattttt tttaatatcc tcgtagaaga ggtagaggat ccggtgcatg 180
tcttttgcag cccaccatcc tttcacatgg tcaaaccagg acccgccaac aacttttccg 240
gacatgaatt tctcataaaa ttcctctaag ttctgaggat caggcataaa ggaagccatc 300

ctgtgaaagt ggtagtagga caccaggcaa tccttgggat ttctggccac atagacaatc 360
ttgcagtttt ctttccagat agatggtgga atcagatgtg aagggagatg 410

<210> 828
<211> 395
<212> DNA
<213> Homo sapiens

<400> 828
cccttagcgt ggtcgcggcc gaggtaccgc agtatggttg gccatgggat tatccttcat 60
tacatcaaat gaggtatggt ggacaatctt gtttataaca tcacctgacc aagttttctc 120
caagaattcc aacaccttgt ggatctcatg ttttggattt tttttaatat cctcgtagaa 180
gaggtagagg atccggtgca tgtcttttgc agcccaccat cctttcacat ggtcaaacca 240
ggacccgcca acaacttttc cggacatgaa tttctcataa aattcctcta agttctgagg 300
atcaggcata aaggaagcca tcctgtgaaa gtggtagtag gacaccaggc aatccttggg 360
atttctggcc acatagacaa tcttgcagtt ttctt 395

<210> 829
<211> 315
<212> DNA
<213> Homo sapiens

<400> 829
cggccgcccg ggcaggtacc gcagtatggt tggccatggg attatccttc attacatcaa 60
atgaggtatg gtggacaatc ttgtttataa catcacctga ccaagttttc tccaagaatt 120
ccaacacctt gtggatctca tgttttggat ttttttttaat atcctcgtag aagaggtaga 180
ggatccggtg catgtctttt gcagcccacc atcctttcac atggtcaaac caggacccgc 240
caacaacttt tccggacatg aatttctcat aaaattcctc taagttctga ggatcaggca 300
taaaggaagc catcc 315

<210> 830
<211> 376
<212> DNA
<213> Homo sapiens

<400> 830
cgcccgggca ggtaccgcag tatggttggc catgggatta tccttcatta catcaaatga 60
ggtatggtgg acaatcttgt ttataacatc acctgaccaa gttttctcca agaattccaa 120
caccttgtgg atctcatgtt ttggattttt tttaatatcc tcgtagaaga ggtagaggat 180
ccggtgcatg tcttttgcag cccaccatcc tttcacatgg tcaaaccagg acccgccaac 240
aacttttccg gacatgaatc tctcataaaa ttcctctaag ttctgaggat caggcataaa 300
ggaagccatc ctgtgaaagt ggtagtagga caccaggcaa tccttgggat ttctggccac 360
atagacaatc ttgcag 376

<210> 831
<211> 379
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2
<223> n = A,T,C or G

<400> 831
nnattggagc tccaccgcgg tggccgagcg gccgcccggg caggtacgcg ggtagacacg 60
ctttccttga actgaaattt tccccataaa gaaaaaccag atttggagtt cgttcttgaa 120
atgtcctcac cacaactgat aaaaacacat ctcccttcac atctgattcc accatctatc 180
tggaaagaaa actgcaagat cgtctatgtg gccagaaatc ccaaggattg cctggtgtcc 240

tactaccact ttcacaggat ggcttccttt atgcctgatc ctcagaactt agaggaattt 300
tatgagaaat tcatgtccgg aaaagttgtt ggcgggtcct ggtttgacca tgtgaaagga 360
tggtgggctg caaaagaca 379

<210> 832
<211> 260
<212> DNA
<213> Homo sapiens

<400> 832
tgattggagc tccccgcggt ggccgagcgg ccgcccgggc aggtacaaca tggatgcatg 60
aaattttaga catgattcta aatgatggtg atgtggagaa atgcaaaaga gcccagactc 120
tagatagaca cgctttcctt gaactgaaat ttccccataa agaaaaacca gatttggagt 180
tcgttcttga aatgtcctca ccacaactga taaaaacaca tctcccttca catctgattc 240
caccatctat ctggaaagaa 260

<210> 833
<211> 612
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 505, 598, 606
<223> n = A,T,C or G

<400> 833
accgcagtat ggttggccat gggattatcc ttcattacat caaatgaggt atggtggaca 60
atcttgttta taacatcacc tgaccaagtt ttctccaaga attccaacac cttgtggatc 120
tcatgttttg gatttttta atatcctcgt agaagaggta gaggatccgg tgcatgtctt 180
ttgcagccca ccatcctttc acatggtcaa accaggaccc gccaacaact tttccggaca 240
tgaatttctc ataaaattcc tctaagttct gaggatcagg cataaaggaa gccatcctgt 300
gaaagtggta gtaggacacc aggcaatcct tgggatttct ggccacatag acaatcttgc 360
agttttcttt ccagatagat ggtggaatca gatgtgaagg gagatgtgtt tttatcagtt 420
gtggtgagga catttcaaga acgaactcca aatctggttt ttctttatgg ggaaatttca 480
gttcaaggaa aacgtgtcta tctanaagtc tgggctcttt tgcatttctc cacatcacca 540
tcatttagaa tcatgtctaa aatttcatgc atccatgttg tacctcggcc cgctctanaa 600
actagnggga tc 612

<210> 834
<211> 501
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 29, 32, 58, 65, 109
<223> n = A,T,C or G

<400> 834
aggtacaaca tggatgcatg aaattntana cntgattcta aatgatggtg atgtgganaa 60
atgcnaaaga gcccagactc tagatagaca cgctttcctt gaactgaant ttccccataa 120
cagaaaaacc agatttggag ttcgttcttg aaatgtcctc accacaactg ataaaaacac 180
atctcccttc acatctgatt ccaccatcta tctggaaaga aaactgcaag attgtctatg 240
tggccagaaa tcccaaggat tgcctggtgt cctactacca ctttcacagg atggcttcct 300
ttatgcctga tcctcagaac ttagaggaat tttatgagaa attcatgtcc ggaaaagttg 360
ttggcgggtc ctggtttgac catgtgaagg gatggtgggg ctgcaaaaag acatgcaccg 420
gatcctctta cctcttctac gagggatatt aaaaaaaatc ccaaaaacca tgagatcccc 480
aaaggtggtt ggaattcttg g 501

<210> 835
<211> 637
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 163, 635
<223> n = A,T,C or G

<400> 835
ccgggcaggt accgcagtat ggttggccat gggattatcc ttcattacat caaatgaggt 60
atggtggaca atcttgttta taacatcacc tgaccaagtt ttctccaaga attccaacac 120
cttgtggatc tcatgttttg gatttttttt aatatcctcg tanaagaggt agaggatccg 180
gtgcatgtct tttgcagccc accatccttt cacatggtca aaccaggacc cgccaacaac 240
ttttccggac atgaatttct cataaaattc ctctaagttc tgaggatctg gcataaagga 300
agccatcctg tgaaagtggt agtaggacac caggcaatcc ttgggatttc tggccacata 360
gacaatcttg cagttttctt tccagataga tggtggaatc agatgtgaag ggagatgtgt 420
ttttatcagt tgtggtgagg acatttcaag aacgaactcc aaatctggtt tttctttatg 480
gggaaatttc agttcaagga aagcgtgtct atctagagtc tgggctcttt tgcatttctc 540
ccatcaccat catttaaaat catgtctaaa atttcatgca tccatgttgt acctcgccgt 600
ctagaactag tggatccccg ggctgcagga attcnat 637

<210> 836
<211> 542
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 493
<223> n = A,T,C or G

<400> 836
aggtacaaca tggatgcatg aaattttaga catgattcta aatgatggtg atgtggagaa 60
atgcaaaaga gcccagactc tagatagaca cgctttcctt gaactgaaat ttccccataa 120
agaaaaacca gatttggagt tcgttcttga aatgtcctca ccacaactga taaaaacaca 180
tctcccttca catctgattc caccatctat ctggaaagaa aactgcaaga ttgtctatgt 240
ggccagaaat cccaaggatt gcctggtgtc ctactaccac tttcacagga tggcttcctt 300
tatgcctgat cctcagaact tagaggaatt ttatgagaaa ttcatgtccg gaaaagttgt 360
tggcgggtcc tggtttgacc atgtgaaagg atggtgggct gcaaaagaca tgcaccggat 420
cctctacctc ttctacgagg atattaaaaa aaatccaaaa catgagatcc acaaggtgtt 480
ggaattcttg ganaaaactt ggtcaggtga tgttataaac aaagattgtc caccatacct 540
ca 542

<210> 837
<211> 416
<212> DNA
<213> Homo sapiens

<400> 837
gattggagct ccccgcggtg gcggccgccc gggcaggtac aacatggatg catgaaattt 60
tagacatgat tctaaatgat ggtgatgtgg agaaatgcaa aagagcccag actctagata 120
gacacgcttt ccttgaactg aaatttcccc ataaagaaaa accagatttg gagttcgttc 180
ttgaaatgtc ctcaccacaa ctgataaaaa cacatctccc ttcacatctg attccaccat 240
ctatctggaa agaaaactgc aagattgtct atgtggccag aaatcccaag gattgcctgg 300
tgtcctacta ccactttcac aggatggctt cctttatgcc tgatcctcag aacttagagg 360
aattttatga gaaattcatg tccggaaaag ttgttggcgg gtcctggttt gaccat 416

<210> 838
<211> 423
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 302
<223> n = A,T,C or G

<400> 838
cgggcaggta caacatggat gcatgaaatt ttagacatga ttctaaatga tggtgatgtg 60
gagaaatgca aaagagccca gactctagat agacacgctt tccttgaact gaaatttccc 120
cataaagaaa aaccagattt ggagttcgtt cttgaaatgt cctcaccaca actgataaaa 180
acacatctcc cttcacatct gattccacca tctatctgga aagaaaactg caagattgtc 240
tatgtggcca gaaatcccaa ggattgcctg gtgtcctact accactttca caggatggct 300
tnctttatgc ctgatcctca gaacttagag gaattttatg agaaattcat gtccggaaaa 360
gttgttggcg ggtcctggtt tgaccatgtg aaaggatggt gggctgcaaa agacatgcac 420
cgg 423

<210> 839
<211> 238
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 24, 33, 75, 90, 98, 111, 127, 142, 185, 189, 203, 213,
215
<223> n = A,T,C or G

<400> 839
ccctttcnag cggccgcccg ggcnggtact ganctccaca aacgtggcca tggttggtgc 60
ggaaatgatt ctgantgagc aggtaaaagn ctcacgtnct gctgtgtcca nagttggttc 120
cttccanagg gttcgtggtc tngctggctt caagaatgaa gccgtggacc ttcacagtgt 180
gtgtnacanc tgttaaagat gtngtgtctg gantnacgtt ccttcacatg tgtctgga 238

<210> 840
<211> 352
<212> DNA
<213> Homo sapiens

<400> 840
acgcggggag gagagatcaa acagaactgc tgctgggtgg ttgtcaggag ctgctacacg 60
gagaaccctg gactattcga tcaagcagca aggctatatg ttcacttatg cagaaatgga 120
ccattgcaga tgctaatctt tgttgtgcaa gcgaaggctc acttggaagg aaatactcag 180
cccctctctg ggcagcattt gagttcctta tggataccga gtcgcgaaac aagttatttt 240
ttttaatgta tccttcttta tgaggagaat gctacccaaa aatgtattaa aggaatatta 300
agtcgtccag agactgtctt gctaccaaga actgtgcaat ggaattcttt tt 352

<210> 841
<211> 307
<212> DNA
<213> Homo sapiens

<400> 841
acctcagttg gaaatgcaga aatcacccat cttctacatc gatcttgctg ggagctgcag 60
accagagctg ttcctatttg gctatcttgg aagcaacctc aggtatttct ttattagcag 120

tgtgagaaca gactaataca gattactaaa tccagaatcc agagaacaca agattataag 180
ttccttgcgc ttgagcatgt tcagtgagag cgctgcaggg agaaggatga tgcattctga 240
gagccaacag ggctggactg gaaactggag gaagagaaag agctaaggaa ggagaggagc 300
aaattgg 307

<210> 842
<211> 309
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 35, 41, 44, 51, 54, 57, 61, 63, 66, 70, 72, 78, 110, 117, 126, 128, 136, 143, 145, 151, 154, 158, 166, 168, 170, 172, 181, 189, 194, 197
<223> n = A,T,C or G

<400> 842
cccttagcgt ggtcgcggcc gaggtacctg acttngggta ngtngccata ntanganсat 60
nangcntggn tnggaaanta catacttttt cccaccattc ttttgataan atcaacntat 120
ggactncntc tacttncatg atntnaaaca ntantggntt tttttncntn gngggagcgt 180
ntttctcant cttnacnatt gggaatcaga tgggcttttg gcttatctct ccctgtgtga 240
gccattaaag gggataataa ggatcattgc ttatattctc tgtgaattta taattaatga 300
aaaaggatt 309

<210> 843
<211> 267
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 63, 115, 117, 127, 137, 144, 146, 161, 166, 171, 172, 174, 176, 178, 179, 180, 181, 184, 197, 207, 208, 210, 214, 216, 220, 221, 224, 228, 242, 247
<223> n = A,T,C or G

<400> 843
cccttagcgt ggtcgcggcc gaggtacgcg ggctttnaag aagtccttgt tggaattttc 60
ctnagctaga tttcaagcca tgtcaggaca ccactctcat tatattacca taatngnttt 120
ttctttnttt ttttttnaaa tttnantttt ttaaaattcc nggatncatg nncngnannn 180
nccntatttt ttttaangtc aaatccnncn ttantntccn ngtngatnac aaatataacc 240
cngaggnaat tttttttttt ttttttt 267

<210> 844
<211> 340
<212> DNA
<213> Homo sapiens

<400> 844
aggtactgtg ggttctgagt caaggatccc agtgctgcca ggaaccagca gtcagctgcg 60
cctccttgtt ggatgtcaaa tctgcttata tcatccagga tgaagtgagg aggacccct 120
ggtagatcct gtggccgctt ccatatcaca ttggagaggc gtttttcctg gagcagcttc 180
tggcctatgg aagaatctgc tgcagggaat gtctcatcct taaacgtccg gcccatgctc 240
aggcagtgat cccgcaaggt ggtaaagtcc tggtctttga acttgatgat ggaggtctcc 300
actgaaggct cctggtaata cgccatgact ctccttagaa 340

<210> 845
<211> 390

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2
<223> n = A,T,C or G

<400> 845
tnagggcgaa ttggagctcc ccgcggtggc ggccgcccgg gcaggtactg atcatagttg 60
atcacaattg gagggggaag ggctgtggct tctcaaatca aaggaggctg gtgggttaaa 120
atcatcaaca gcatttcatg gtcttaagtt cacttctcat caaaggatcc ctgtggtgtt 180
gtgtttgatc ttgaacttgc tttgctgttt tagtcttttc catcaagtga aaaaactact 240
ttgatgacat cctttcatcc ttttcattct tccagcagta tttggtatct ttttacacta 300
ggcttgcagg ccagggaatc tgcatgccag tctccacttg ctgaacagca gttttctttt 360
gatcatattc ggttttagga cacttgaggc 390

<210> 846
<211> 346
<212> DNA
<213> Homo sapiens

<400> 846
aggtactgtg ggttctgagt caaggatccc agtgctgcca ggaaccagca gtcagctgcg 60
cctccttgtt ggatgtcaaa tctgcttata tcatccagga tgaagtgagg aggacccccct 120
ggtagatcct gtggccgctt ccatatcaca ttggagaggc gtttttcctg gagcagcttc 180
tggcctatgg aagaatctgc tgcagggaat gtctcatcct taaacgtccg gcccatgctc 240
aggcagtgat cccgcaaggt ggtaaagtcc tggtctttga acttgatgat ggaggtctcc 300
actgaaggct cctggtaata cgccatgact ctccttagaa gacttc 346

<210> 847
<211> 350
<212> DNA
<213> Homo sapiens

<400> 847
ccgggcaggt acgcggggaa agtgtgtagc acctccacct tctctctctc tctccctctc 60
cctctcctgc cagccaagtg aagacatgct tacttcccct tcaccttcct tcatgatgtt 120
accattggaa tgacatactg catcctatag ttataccatc cactctgaaa tcaatgtgaa 180
tttaacttca gttccataca gaaacttctt ttccacaggt aagaaacggt tgaactggat 240
gcaattttta tcacagcttg tgtaagactg cctctgtccc tcctctcaca tgccattggt 300
taaccagcag acagtgtgct cgggggcgtt gccagctcat tgctcttata 350

<210> 848
<211> 352
<212> DNA
<213> Homo sapiens

<400> 848
aggtactgtg ggttctgagt caaggatccc agtgctgcca ggaaccagca gtcagctgcg 60
cctccttgtt ggatgtcaaa tctgcttata tcatccagga tgaagtgagg aggacccccct 120
ggtagatcct gtggccgctt ccatatcaca ttggagaggc gtttttcctg gagcagcttc 180
tggcctatgg aagaatctgc tgcagggaat gtctcatcct taaacgtccg gcccatgctc 240
aggcagtgat cccgcaaggt ggtaaagtcc tggtctttga acttgatgat ggaggtctcc 300
actgaaggct cctggtaata cgccatgact ctccttagaa gacttccgag gt 352

<210> 849
<211> 433
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 396
<223> n = A,T,C or G

<400> 849
attggagctc cccgcggtgg cggcccgagg tactgtgggt tctgagtcaa ggatcccagt 60
gctgccagga accagcagtc agctgcgcct ccttgttgga tgtcaaatct gcttatatca 120
tccaggatga agtgaggagg accccctggt agatcctgtg gccgcttcca tatcacattg 180
gagaggcgtt tttcctggag cagcttctgg cctatggaag aatctgctgc agggaatgtc 240
tcatccttaa acgtccggcc catgctcagg cagtgatccc gcaaggtggt aaagtcctgg 300
tctttgaact tgatgatgga ggtctccact gaaggctcct ggtaataccc catgactctc 360
cttagaagac ttccgaggtc ctttcctgtt tcctangcag gtgtgtctga tggaggaggg 420
gagaccggca ggt 433

<210> 850
<211> 254
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 41, 46, 50, 56, 85, 102, 107, 145, 176, 181, 184
<223> n = A,T,C or G

<400> 850
ntccttttttt tttttaattt ttaaatcagc tttcctagct ngaagngttn ctagtnttga 60
atggtgggat gtagtcaagg aggtntttgt tcaaggttgg anatgancag cttttataat 120
aattccaggt ttgggatata tcagngaaat ttcatttttc attttctact aacagngcca 180
natnggcctc acttttggga ctggatcagg cagctgctgg ccatggaaat gaatttttcc 240
agtacacagc ccca 254

<210> 851
<211> 333
<212> DNA
<213> Homo sapiens

<400> 851
acgcggggat gagatctggt tgtttgaaag tgtgtagcac ctccaccttc tctctctccc 60
tccctctccc tctcctgcca gccaagtgaa gacatgctta cttccccttc accttccttc 120
atgatgttac cattggaatg acatactgca tcctatagtt ataccatcca ctctgaaatc 180
aatgtgactt taacttcagt tccatacaga aacttctttt ccacgggtaa gaaacggttg 240
aactggatgc aatttttatc acagcttgtg taagactgcc tctgtccctc ctctcacatg 300
ccattggtta accagcagac agtgtgctca ggg 333

<210> 852
<211> 376
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3
<223> n = A,T,C or G

<400> 852
ctnattggag ctccaccgcg gtggcctacc ggaactgaat ctgccttcca agttacacgg 60

ataagaatta tggttcgacg tggtggcatc ggtgcccagt gtgggttggt gtttgcctat 120
aactcatctt cagataaatt ttgtgcagga agaacacttc aaaaggtttg aaaaatatga 180
caaatggaag cttcaggagc tcaggcaatt tgtaaaaagc aggtaagaag gtaaaaaatc 240
tttgtagaac aaagatctac agaacaaaaa tctttgtagt taataagaat gtattcatgc 300
tcattggtga actgtgcttg cttgtcttta tagaaaaggc gccactaatc catctcagtg 360
gccataagcc ttcatt 376

<210> 853
<211> 381
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 10, 14, 16, 17, 19, 21, 29, 33, 37, 39, 40, 47, 54, 56, 57,
58, 65, 66, 74, 78, 84, 90, 94, 95, 96, 100, 101, 103, 108,
112, 122, 124, 127, 135, 136, 148, 322
<223> n = A,T,C or G

<400> 853
atgtacaccn ggtnannanc ntggcctgng gcngtangnn ctcatgntca tctntnnntg 60
gaaanncta gggnggcnca gggncaacan tttnnnacan nanctgangg tnaaacggcc 120
tntngcngac ttaannctca tgcctgtnaa ttggaaatac aaagacctcc aaaaaaggac 180
cagttcctcg gatgtgcccc ctcacagaga gatgaagggg cagcagaaaa cagctgaaac 240
ggaagagggg acagtgcaga ttcaggaagg tgcagtggct actggggaag acccaaccag 300
tgtggctatt gccagcatcc antcagctgc caccttcctg accccaacgt caagtgatgt 360
acctgcccgg gcggccgctc g 381

<210> 854
<211> 342
<212> DNA
<213> Homo sapiens

<400> 854
agctccccgc ggtggcggcc gaggtactgt cgttgggttg cacccaaggc acttgggccc 60
acctgccttc ccacacactc actatccaga aaagaggaaa agcctaaaga tgacacacct 120
tcctccctac tcaggcctcc tcggcgatgg ctttgattgt cttgtgtttt ttataggggc 180
caaagagcag ttgatttttt ttcaaagtct agtatttctc tgaagattct acatctctac 240
acaagatatt cattcttttg gtcacctagg gatcttctaa gtgtgatatt actttcagag 300
aattcagaca agtgagaaac aataatgtag gagtcagcaa ag 342

<210> 855
<211> 402
<212> DNA
<213> Homo sapiens

<400> 855
ctgattggag ctccccgcgg tggcggcccg aggtacgcgg ggagactctg cctttttcaac 60
atggatggct cctcccgctg ccgctgccgc tccaggagac agcattacag agcatcagtt 120
aggtgcagag actgggcagt gcgcccgtgt gcaaagacag gagacacgaa tcttccctga 180
aggagtgaca gtctagggag gaaggcagac tgcaggggac ctacttctct cgggaatctc 240
aatacttgga acaagaacct cctagacgga ccctttggca taatgaattg gaccaactgt 300
aggttccagg actagagagc cagcaatgcc tccatgaaca atctcaccca attactctgc 360
tcaggaaacg aggtaactga tggacagccg aggcagcccc tt 402

<210> 856
<211> 357
<212> DNA
<213> Homo sapiens

<400> 856
cgaggtactg tgggttctga gtcaaggatc ccagtgctgc caggaaccag cagtcagctg 60
cgcctccttg ttggatgtca aatctgctta tatcatccag gatgaagtga ggaggacccc 120
ctggtagatc ctgtggccgc ttccatatca cattggagag gcgtttttcc tggagcagct 180
tctggcctat ggaagaatct gctgcaggga atgtctcatc cttaaacgtc cggcccatgc 240
tcaggcagtg atcccgcaag gtggtaaagt cctggtcttt gaacttgatg atggaggtct 300
ccactgaagg ctcctggtaa tacgccatga ctctccttaa aagacttccg aggtcct 357

<210> 857
<211> 426
<212> DNA
<213> Homo sapiens

<400> 857
ccgggcaggt acaggacaca atccctgctt cattcttggc tgacacagta taccacccag 60
catcttcttt tgtggctccc tgaatgagca ggcagatgta gccgtggttg tcctggtgca 120
tgctggagaa aaggataaag tcattagggt tctaaatttt ttaaaagtgg ctttggacat 180
gaagcatcat ttttaattag atcattagaa acagaattgt gcaagtagct gataataggg 240
tcatacttat tctgtagaga ttactagctc cattaaagtt aatgggagaa agaacagacg 300
tcaagagttg aatacatctg tgtgcttaat tcctagttga ggatctgcct ttacaaaaac 360
cactgaatag tcttttatca ctaaagcaaa tgaattcatc ttttctttta gatagaatga 420
taaaca 426

<210> 858
<211> 318
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 5, 6, 9, 13, 23, 36, 51, 56, 61, 67, 72, 80, 81, 87, 103, 104, 106, 126
<223> n = A,T,C or G

<400> 858
ttntnncant ctnatcagat acntggccga cctccnaggg ggggcccggg naccgngact 60
nttgtcncat tnagtgaggn ncaatcngga ggcttggccg tanntntgga ccatatctgg 120
ttctcntgct ccatgagaaa agttttagag acagtctttg atgaagtcat catggtagat 180
gtcttggaca gtggcgattc tgctcatcta accttaatga agaggccaga gttgggtgtc 240
acgctgacaa agctccactg ctggtcgctt acacagtatt caaaatgtgt attcatggat 300
gcagatactc tggtccta 318

<210> 859
<211> 337
<212> DNA
<213> Homo sapiens

<400> 859
acgcggggag actctgcctt ttcaacatgg atggctcctc ccgctgccgc tgccgctcca 60
ggagacagca ttacagagca tcagttaggt gcagagactg ggcagtgcgc ccgtgtgcaa 120
agacaggaga cacgaatctt ccctgaagga gtgacagtct agggaggaag gcagactgca 180
ggggacctac ttctctcggg aatctcaata cttggaacaa gaacctccta gacggacccct 240
ttggcataat gaattggacc aactgtaggt tccaggacta gagagccagc aatgcctcca 300
tgaacaatct cacccaatta ctctgctcag gaaacga 337

<210> 860
<211> 384
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 2
<223> n = A,T,C or G

<400> 860
cnaattggag ctccccgcgg tggcggccga ggtactgtgg gttctgagtc aaggatccca 60
gtgctgccag gaaccagcag tcagctgcgc ctccttgttg gatgtcaaat ctgcttatat 120
catccaggat gaagtgagga ggaccccctg gtagatcctg tggccgcttc catatcacat 180
tggagaggcg tttttcctgg agcagcttct ggcctatgga agaatctgct gcagggaatg 240
tctcatcctt aaacgtccgg cccatgctca ggcagtgatc ccgcaaggtg gtaaagtcct 300
ggtctttgaa cttgatgatg gaggtctcca ctgaaggctc ctggtaatac gccatgactc 360
tccttagaag acttccgagg tcct 384

<210> 861
<211> 676
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 3, 4, 7, 9, 20, 40, 41, 45, 48, 54, 57, 64, 65, 67, 69,
70, 71, 72, 78, 81, 85, 92, 101, 104, 109, 114, 125, 129,
130, 131, 133, 135, 139, 140, 146, 159, 162, 165, 168, 178,
179, 180, 187, 190, 194, 197, 198, 201, 202, 203, 210
<223> n = A,T,C or G

<221> misc_feature
<222> 215, 219, 220, 229, 251, 261, 288, 300, 301, 306, 312, 316,
317, 318, 320, 326, 329, 330, 331, 332, 333, 335, 337, 344,
575, 657, 662, 664, 670, 672
<223> n = A,T,C or G

<400> 861
ncnngcntng tcctatatcn aatataccca ttgcgggccn ngccnctngg aggnctnttc 60
tcanntnann nnatcatncg ntganggtgg cnttagatcc naantatcnc cccnttgact 120
gtgcntatnn ntntnagann ctgcancaag cgggataanc cnttnatnat aatatccnnn 180
ataaggntgn gatnctnnag nnnctgtgcn tctgntggnn agtagtganc tctttcttta 240
ccagacccct ngtggacgaa ngcttttata caagaccctc ctggaccntg cagctatacn 300
ntatgnacct gnatcnnntn ccctgnccnn nnngntncct gacnggggat gactttttcc 360
ccaaagatga taaaggtaat atgatcagtg gaaaaggaac gttcttggat gcctgggagg 420
ccatggagga gctggtggac gaggggctgg tgaaagccct tggggtctca aatttcaacc 480
acttccagat cgagaggctc ttgaacaaac ctggactgga aatataaacc agtgactaac 540
caggtttgag tgtcacccat acctcacgcc agganaaact gatccagtcc tcggcccgtc 600
ttaaaactag tggatccccc cggcttgcag gaaattcgat ttcaaagctt atcgatnccc 660
gncnacctcn angggg 676

<210> 862
<211> 465
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 451
<223> n = A,T,C or G

<400> 862
gccatgctct cctcctctgc cagtctcctc caccactctc taacctgaga gcctgtggaa 60
cctgcccgtc tcccctcctc catcagacac acctgcctag gaaacaggaa aggacctcgg 120
aagtcttcta aggagagtca tggcgtatta ccaggagcct tcagtggaga cctccatcat 180
caagttcaaa gaccaggact ttaccacctt gcgggatcac tgcctgagca tgggccggac 240
gtttaaggat gagacattcc ctgcagcaga ttcttccata ggccagaagc tgctccagga 300
aaaacgcctc tccaatgtga tatggaagcg gccacaggat ctaccagggg gtcctcctca 360
cttcatcctg gatgatataa gcagatttga catccaacaa ggaggcgcag ctgactgctg 420
gttcctggca gcactgggat ccttgactca naacccacag tacct 465

<210> 863
<211> 519
<212> DNA
<213> Homo sapiens

<400> 863
ccgggcaggt acctgaaaaa cagctggtag gatggaggaa ctgagctttt aaataggcaa 60
atgtggctag gagctaccat actggacagc acagtgtatt agtttggtgc aaaagtaatt 120
gtggttttgg ccatttttaa gtggattggt aagcctggct atttaaagtg tggtccacag 180
agcaggagaa tcactgcacc tgagagctgg tggaaatgta gatctctgac gttagcatag 240
gcttcctaaa tcagaaactg cattctaaca agatctcctg gtgcttctca tgcacagtaa 300
agtttagaaa gttaggagat gcatacaagt ggttctcatc ctgacagcac ttcagacaca 360
actgagaaac attaaaagaa gctgagccta ggtcacaccc tccacccaga gattcttagg 420
ttaatggttt aaaggcttgg cctgaacatg aagagtttta aaagcactct gggggattct 480
aataaaaatt cgagaaccat cccagcataa gtcagtcct 519

<210> 864
<211> 393
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 864
naattggagc tccccgcggt ggcggccgag gtactgtggg ttctgagtca aggatcccag 60
tgctgccagg aaccagcagt cagctgcgcc tccttgttgg atgtcaaatc tgcttatatc 120
atccaggatg aagtgaggag gaccccctgg tagatcctgt ggccgcttcc atatcacatt 180
ggagaggcgt tttcctgga gcagcttctg gcctatggaa gaatctgctg cagggaatgt 240
ctcatcctta aacgtccggc ccatgctcag gcagtgatcc cgcaaggtgg taaagtcctg 300
gtctttgaac ttgatgatgg aggtctccac tgaaggctcc tggtaatacg ccatgaccct 360
ccttagaaga cttccgaggt cctttcctgt ttc 393

<210> 865
<211> 465
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 271, 412
<223> n = A,T,C or G

<400> 865
nattggagct ccccgcggtg gcggccgccc gggcaggtac ctgactgtgg ctcagatctg 60
cgtcgcagca gcgagagaag aaatcactcc atatccgatg agaggaagag tggcacagag 120
atggtgtcta caattagaga catttctgac tccaccttag cctaagcaaa ctttatatac 180

tgagtaacat ttgaaggttg tcttttaatg gtgggggtg tttttttcct ttttaaacta 240
cagtgcttgc acaagagagg gagggactca naaaaggtta gggcaggtga gggagacagt 300
agatggcctg ggatgacttg agtccatcat actattgctt tggcgggtgt cctccccat 360
gtttgattca aattccatga gtgacctacc tttccccagg aatgggactg anagggtaag 420
tctccacaac tcagtctgca cagggctccc cgttcaggct gcctt 465

<210> 866
<211> 469
<212> DNA
<213> Homo sapiens

<400> 866
agctccaccg cggtggcggc cggccatgct ctcctcctct gccagtctcc tccaccactc 60
tctaacctga gagcctgtgg aacctgcccg tctcccctcc tccatcagac acacctgcct 120
aggaaacagg aaaggacctc ggaagtcttc taaggagagt catggcgtat taccaggagc 180
cttcagtgga gacctccatc atcaagttca aagaccagga ctttaccacc ttgcgggatc 240
actgcctgag catgggccgg acgtttaagg atgagacatt ccctgcagca gattcttcca 300
taggccagaa gctgctccag gaaaaacgcc tctccaatgt gatatggaag cggccacagg 360
atctaccagg gggtcctcct cacttcatcc tggatgatat aagcagattt gacatccaac 420
aaggaggcgc agctgactgc tggttcctgg cagcactggg atccttgac 469

<210> 867
<211> 459
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 353
<223> n = A,T,C or G

<400> 867
ggagctcccc gcggtggcgg ccggccatgc tctcctcctc tgccagtctc ctccaccact 60
ctctaacctg agagcctgtg gaacctgccc gtctcccctc ctccatcaga cacacctgcc 120
taggaaacag gaaaggacct cggaagtctt ctaaggagag tcatggcgta ttaccaggag 180
ccttcagtgg agacctccat catcaagttc aaagaccagg actttaccac cttgcgggat 240
cactgcctga gcatgggccg gacgtttaag gatgagacat tccctgcagc agattcttcc 300
ataggccaga agctgctcca ggaaaaacgc ctctccaatg tgatatggaa gcngccacag 360
gatctaccag ggggtcctcc tcacttcatc ctggatgata taagcagatt tgacatccaa 420
caaggaggcg cagctgactg ctggttcctg gcagcactg 459

<210> 868
<211> 577
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2, 563, 565, 566, 567
<223> n = A,T,C or G

<400> 868
nnattggagc tccccgcggt ggcggagatg tagtcttcac agtgagttgt tatttgtagc 60
tgtgtttttg tttttgtata gcttatagca atgcagtgtg ctttttatta acatcatttt 120
cttttctttt tgcagtgatt atttattcaa gttacttctg attggcgact caggggttgg 180
aaagtcttgc cttcttctta ggtttgcagt aagttgaaat tgaaatgtct ttacaattaa 240
tggtacaatt aatgctatgt atgttttcta ggtagataaa attaaacagt tttattcaga 300
ataagttaat tcttccagaa tttatatatt taaagactcc aaatatacat ccccagtggt 360
atcttggact gttaaataga aaaatattgt tgctcttaaa agaaattcag tgaagtctgg 420

ttataaagtc agaatgtcta atacttttgg tcagagtcaa acagcagttc caatataggc 480
agcaagttaa aggggtagtt ggtggcctgt gttgaaagcg acttgatgaa aataaatctt 540
taaattaaac tttagtagag canannnaaa aaaaaaa 577

<210> 869
<211> 619
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 460, 535, 601
<223> n = A,T,C or G

<400> 869
aggtacaact gcatacacgg aacttttgcc gtaaccacaa caaacgccca tccagatggc 60
tccggcttaa gtttctatgc ttcactaacc ccaaggccca ctagtgcagc cagcagttgg 120
gttttcctct ttggcaagtc agtcaggcca tacagaatct gctacaagtt cccttcctac 180
cagttgaact gtttgctgag catgcaggaa tagcctctga atagtatggc ctgctgtaaa 240
gggcaagctg gaagtacctg cccgggcgga atgatcagga ggagacagcc ggcgttgtgt 300
ccacccccct cattaggaac ggtgactgga ccttccagat cctggtgatg ctggaaatga 360
ctccccagcg tggagatgtc tacacctgcc acgtggagca ccccagcctc cagagcccca 420
tcaccgtgga gtggcgggct cagtctgaat ctgcccagan caagatgctg agtggcgttg 480
gaggcttcgt gctggggctg atcttccttg ggcttggcct tatcatccgt caaangagtc 540
ggaaagggct tctgcactga ctcctgaaac tgtttaactt aagactggtt atcactcttt 600
ntgtgatgcc tgtttgtcc 619

<210> 870
<211> 446
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 35, 37, 42, 49, 50, 52, 57, 58, 61, 63, 64, 66, 68, 69, 75,
80, 93, 95, 99, 101, 102, 103, 109, 110, 113, 117, 123,
136, 138, 139, 145, 149, 162, 176, 195, 196, 197, 239, 389
<223> n = A,T,C or G

<400> 870
tggagctccc cgcggtggcg gccgatgtac acctngngca tncaaccgnn tncatgnntt 60
ncnncncnng ctaanctatn cccttaccct ctngnggang nnngttgcnn atntttngtc 120
tcntttaccg aacggntnnt tgagngctng gcgtaatcat angtacatat cttgtngctt 180
cgttcttgaa gtcannnaca ccacatcgag cggccgcccg ggcaggtaca aaagccaana 240
tgcccattgt gggcctgggc acttggaggt ctcttctcgg caaagtgaaa gaagcggtga 300
aggtggccat tgatgcagaa tatcgccaca ttgactgtgc ctatttctat gagaatcaac 360
atgaggtggg agaagccatc caagagaana tccaagagaa ggctgtgatg cgggaggacc 420
tgttcatcgt cagcaaggtg tggccc 446

<210> 871
<211> 350
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3, 4
<223> n = A,T,C or G

<400> 871
gcnnattgga gctccccgcg gtggcggccg aggtacgggt cctcctcacg agctgccgcc 60
gcactgcacc gcacagtgaa acactgcagg ttgttactga ggaggaagac acaggctgct 120
gagcaaagtg aggccaagaa ccaacatacc cacagcaggg agggtttcac aggcaaacag 180
ggcaatgggc aggggtgaca gtcaagtatt tgtcaaatat tgccaagtta aactgcttct 240
caataagagg aatgcctcag aatccctgtg gtgtgttttt aaaaatatac aactggtccc 300
cataacaccc ctagtgaatc gcaatctcta ggggctgaat ctggacgtgt 350

<210> 872
<211> 423
<212> DNA
<213> Homo sapiens

<400> 872
acgcggggga aagtgtgtag cacctccacc ttctctctct ctctccctct ccctctcctg 60
ccagccaagt gaagacatgc ttacttcccc ttcaccttcc ttcatgatgt taccattgga 120
atgacatact gcatcctata gttataccat ccactctgaa atcaatgtga atttaacttc 180
agttccatac agaaactttt tttccacagg agtttaagcc caagctggag tgcgatggtg 240
caatcccaac tcactgcaac ctctgcctcc caggttcaag ctattttcct ggcttaacct 300
ccggagtagc tggaattaca gatgtgcgcc cccatgacca gtaagaaacg gttgaactgg 360
atgcaatttt tatcacagct tgtgtaagac tgcctctgtc cctcctctca catgccattg 420
gtt 423

<210> 873
<211> 329
<212> DNA
<213> Homo sapiens

<400> 873
aggtacgggt cctcctcacg agctgccgcc gcactgcacc gcacagtgaa acactgcagg 60
ttgttactga ggaggaagac acaggctgct gagcaaagtg aggccaagaa ccaacatacc 120
cacagcaggg agggtttcac aggcaaacag ggcaatgggc aggggtgaca gtcaagtatt 180
tgtcaaatat tgccaagtta aactgcttct caataagagg aatgcctcag aatccctgtg 240
gtgtgttttt aaaaatatac aactggtccc cataacaccc ctagtgaatc gcaatctcta 300
ggggctgaat ctggacgtgt acctgcccg 329

<210> 874
<211> 458
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 874
nattggagct ccccgcggtg gcggccggcc atgctctcct cctctgccag tctcctccac 60
cactctctaa cctgagagcc tgtggaacct gcccgtctcc cctcctccat cagacacacc 120
tgcctaggaa acaggaaagg acctcggaag tcttctaagg agagtcatgg cgtattacca 180
ggagccttca gtggagacct ccatcatcaa gttcaaagac caggacttta ccaccttgcg 240
ggatcactgc ctgagcatgg gccggacgtt taaggatgag acattccctg cagcagattc 300
ttccataggc cagaagctgc tccaggaaaa acgcctctcc aatgtgatat ggaagcggcc 360
acaggatcta ccagggggtc ctcctcactt catcctggat gatataagca gatttgacat 420
ccaacaagga ggcgcagctg actgctggtt cctggcag 458

<210> 875
<211> 415
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 43, 322
<223> n = A,T,C or G

<400> 875
gagactttgc cttttcaaca tggatggttc ctcccgctgc cgntgccgtt ccaggagaca 60
gcattacaga gcatcagtta ggtgcagaga ctgggcagtg cgcccgtgtg caaagacagg 120
agacacgaat cttcctgaag gagtgacagt ctagggagga aggcagactg caggggacct 180
acttctctcg ggaatctcaa tacttggaac aagaacctcc tagacggacc ctttggcata 240
atgaattgga ccaactgtag gttccaggac tagagagcca gcaatgcctc catgaacaat 300
ctcacccaat tactctgctc angaaacgag gtaactgatg gacagccgag gcagcccctt 360
aggcggctta ggcctcccct gtggagcatc cctgaggcgg actccggcca gcccg 415

<210> 876
<211> 357
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 12, 19, 21, 37, 60, 71, 78, 86, 89, 94, 104, 107, 109,
122, 136, 137, 140, 142, 149
<223> n = A,T,C or G

<400> 876
cgatgtactg nnggttctna ntcaaggatc ccagagntgc caggaaccat cattcatctn 60
cgcctccttg ntggatgnca aatctnctna tatnatccac gatnaantna ggaggacccc 120
cngctagatc ctgtgnncgn tntcatatna cattggagag gcgtttttcc tggagcagct 180
tctggcctat ggaagaatct gctgcaggga atgtctcatc cttaaacgtc cggcccatgc 240
tcaggcagtg atcccgcaag gtggtaaagt cctggtcttt gaacttgatg atggaggtct 300
ccactgaagg ctcctggtaa tacgccatga ctctccttag aagacttccg aggtcct 357

<210> 877
<211> 436
<212> DNA
<213> Homo sapiens

<400> 877
gccatgctct cctcctctgc cagtctcctc caccactctc taacctgaga gcctgtggaa 60
cctgcccgtc tcccctcctc catcagacac acctgcctag gaaacaggaa aggacctcgg 120
aagtcttcta aggagagtca tggcgtatta ccaggagcct tcagtggaga cctccatcat 180
cgagttcaaa gaccaggact ttaccacctt gcggatcact gcctgagcat gggccggacg 240
tttaaggatg agacattccc tgcagcagat tcttccatag gccagaagct gctccaggaa 300
aaacgcctct ccaatgtgat atggaagcgg ccacaggatc taccaggggg tcctcctcac 360
ttcatcctgg atgatataag cagatttgac atccaacaag gaggcgcagc tgactgctgg 420
ttcctggcag cactgg 436

<210> 878
<211> 213
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2
<223> n = A,T,C or G

<400> 878
nnattggagc tccccgcggt ggcggccgag gtacgcgggg agatgattta gggtctctga 60
gagaagaaat ttttaaggat tcaagaggtg atctggcttt tgtgaaagtg tacgcgggga 120
cggcgtctgc tggcggccgc ggagacgcag agtcttgagc agcgcggcag gcaccatgtt 180
cctgactgcg ctcctctggc gcggccgcat tcc 213

<210> 879
<211> 408
<212> DNA
<213> Homo sapiens

<400> 879
aggtactgtg ggttctgagt caaggatccc agtgctgcca ggaaccagca gtcagctgcg 60
cctccttgtt ggatgtcaaa tctgcttata tcatccagga tgaagtgagg aggacccccct 120
ggtagatcct gtggccgctt ccatatcaca ttggagaggc gtttttcctg gagcagcttc 180
tggcctatgg aagaatctgc tgcagggaat gtctcatcct taaacgtccg gcccatgctc 240
aggcagtgat cccgcaaggt ggtaaagtcc tggtctttga acttgatgat ggaggtctcc 300
actgaaggct cctggtaata cgccatgact ctccttagaa gacttccgag gtcctttcct 360
gtttcctagg caggtgtgtc tgatggagga ggggagacgg gcaggttc 408

<210> 880
<211> 409
<212> DNA
<213> Homo sapiens

<400> 880
aggtactgtg ggttctgagt caaggatccc agtgctgcca ggaaccagca gtcagctgcg 60
cctccttgtt ggatgtcaaa tctgcttata tcatccagga tgaagtgagg aggacccccct 120
ggtagatcct gtggccgctt ccatatcaca ttggagaggc gtttttcctg gagcagcttc 180
tggcctatgg aagaatctgc tgcagggaat gtctcatctt aaacgtccgg cccatgctca 240
ggcagtgatc ccgcaaggtg gtaaagtcct ggtctttgaa cttgatgatg gaggtctcca 300
ctgaaggctc ctggtaatac gccatgactc tccttagaag acttccgagg tcctttcctg 360
tttcctaggc aggtgtgtct gatggaggag gggagacggg caggttcca 409

<210> 881
<211> 414
<212> DNA
<213> Homo sapiens

<400> 881
ccgggcaggt acctgacttt gggtaagttg ccagaataag atcatcaggc ttggcttgga 60
aattacatac tttttcccac cattcttttg ataatatcaa cgtagggact ccatctactt 120
ccatgatgtt aaacagttct ggcttttttt ccatcgtggg agcgtttttc tcaatcttcg 180
ccattgggaa tcagttgggc ttttggcttc tctctccctg tgtgagccag taaaggggat 240
aataaggatc attgtttata ttctctgtga atttataatt aatgaaaaag gatttttgtt 300
gatcttaagc tgtagacaat ttggtgtgct ttgcatgtct ttctgtatgg ttctggtatc 360
tcaggcagca gaggaagcag cttgctgcct ttagtcaaac tgcttcctgg aaac 414

<210> 882
<211> 438
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 224
<223> n = A,T,C or G

<400> 882
ggcnaattgg agctccccgc ggtggcggcc gaggtactgt gggttctgag tcaaggatcc 60
cagtgctgcc aggaaccagc agtcagctgc gcctccttgt tggatgtcaa atctgcttat 120
atcatccagg atgaagtgag gaggaccccc tggtagatcc tgtggccgct tccatatcac 180
attggagagg cgtttttcct ggagcagctt ctggcctatg gaanaatctg ctgcagggaa 240
tgtctcatcc ttaaacgtcc ggcccatgct caggcagtga tcccgcaagg tggtaaagtc 300
ctggtctttg aacttgatga tggaggtctc cactgaaggc tcctggtaat acgccatgac 360
tctccttaga agacttccga ggtcctttcc tgtttcctag gcaggtgtgt ctgatggagg 420
aggggagacg ggcaggtt 438

<210> 883
<211> 397
<212> DNA
<213> Homo sapiens

<400> 883
cgaggtactg tgggttctga gtcaaggatc ccagtgctgc caggaaccag cagtcagctg 60
cgcctccttg ttggatgtca aatctgctta tatcatccag gatgaagtga ggaggacccc 120
ctggtagatc ctgtggccgc ttccatatca cattggagag gcgtttttcc tggagcagct 180
tctggcctat ggaagaatct gctgcaggga atgtctcatc cttaaacgtc cggcccatgc 240
tcaggcagtg atcccgcaag gtggtaaagt cctggtcttt gaacttgatg atggaggtct 300
ccactgaagg ctcctggtaa tacgccatga ctctccttag aagacttccg aggtcctttc 360
ctgtttccta ggcaggtgtg tctgatggag gagggga 397

<210> 884
<211> 470
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 884
ngattggagc tccccgcggt ggcggccgag gtacctgact ttgggtaagt tgccagaata 60
agatcatcag gcttggcttg gaaattacat actttttccc accattcttt tgataatatc 120
aacgtaggga ctccatctac ttccatgatg ttaaacagtt ctggcttttt ttccatcgtg 180
ggagcgtttt tctcaatctt cgccattggg aatcagttgg gcttttggct tccctctccc 240
tgtgtgagcc agtaaagggg ataataagga tcattgttta tattctctgt gaatttataa 300
ttaatgaaaa aggattttg ttgatcttaa gctgtagaca atttggtgtg ctttgcatgt 360
ctttctgtat ggttctggta tctcaggcag cagaggaagc agcttgctgc ctttagtcaa 420
actgcttcct ggaaacccag aaccaggtcc agctccagga cactgtgcaa 470

<210> 885
<211> 437
<212> DNA
<213> Homo sapiens

<400> 885
gccatgctct cctcctctgc cagtctcctc caccactctc taacctgaga gcctgtggaa 60
cctgcccgtc tcccctcctc catcagacac acctgcctag gaaacaggaa aggacctcgg 120
aagtcttcta aggagagtca tggcgtatta ccaggagcct tcagtggaga cctccatcat 180
caagttcaaa gaccaggact ttaccacctt gcgggatcac tgcctgagca tgggccggac 240
gtttaaggat gagacattcc ctgcagcaga ttcttccata ggccagaagc tgctccagga 300
aaaacgcctc tccaatgtga tatggaagcg gccacaggat ctaccagggg gtcctcctca 360
cttcatcctg gatgatataa gcagatttga catccaacaa ggaggcgcag ctgactgctg 420
gttcctggca gcactgg 437

<210> 886
<211> 386
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 38, 39, 42, 48, 49, 51, 55, 57, 65, 68, 76, 80, 83, 85, 152, 179, 200, 207, 209, 231, 273, 334, 350, 353, 362, 363, 369
<223> n = A,T,C or G

<400> 886
attggagctc cccgcggtgg cggcccgagg tactgtgnnt tnttattnnt ngatncnatt 60
gctgncanga accaanattn atntncgcct ccttgttgga tgtcaaatct gcttatatca 120
tccaggatga agtgaggagg accccctggt anatcctgtg gccgcttcca tatcacatng 180
gagaggcgtt tttcctggan cagcttntnt cctatggaaa aatctgctgc ngggaatgtc 240
tcatccttaa acgtccggcc catgctcaag cantgatccc gcaaggtggt aaagtcctgg 300
tctttgaact tgatgatgga ggtctccact gaangctcct gggtaatacn ccntgactct 360
anntaaaana cttccaggtc ctttcc 386

<210> 887
<211> 399
<212> DNA
<213> Homo sapiens

<400> 887
cccttagcgt ggtcgcggcc gaggtacgcg gggagctata tcggggatcc aaaggtttca 60
cacaggatga gtcctgtgtc tacatgcagc gtagcaggag ctgggaatgg aagcaaacca 120
atattccagc atctgcttct agaacagtga tcaggatcgc tatcgttaat aagatgggtg 180
tatgtgggac ccaagactca tctgtcaagc ccttcttctg actgctttta aggtgccagt 240
cacgaattgc ccgaacatta cctgctgatc agaaccagaa tgtcggccat actgggaaaa 300
ggatgatgct tcgatgcctc tgccgtttga cctcacagac atcgtttcag aactcagagg 360
tcagcttctg gaagcaaaac cctagaagga gcacaagtc 399

<210> 888
<211> 349
<212> DNA
<213> Homo sapiens

<400> 888
actgattggg gaagtgataa atgttcatga aatcttcaca atttatgttc agagattgca 60
gtaaagacag gcgtaagaaa ttataaaaat attaatgtgg ggaattaaga aatgtccatg 120
aaatcttcac aatttatgtt cttctgccat ggcttcagcc agtctctctg ttgggggtcc 180
ctgaattcct gcaacagctc agaaactaga ggctgagaaa gggagtcact caaaccttga 240
atccctgtgg ccagtgaata agatagacgt ccagatagct cagcttcagg tccttgaggg 300
tcttctcaaa ggctttcctc acaaggggtc tctcaaagaa agtgggcca 349

<210> 889
<211> 417
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 6, 7, 10, 17, 31, 33, 35, 40, 44, 47, 48, 49, 55, 56, 60, 61, 62, 66, 71, 76, 77, 79, 80, 88, 92, 94, 100, 102, 103, 106, 108, 109, 111, 112, 113, 116, 119, 122, 123, 126, 127, 137, 138, 139, 143, 148, 179, 286, 321
<223> n = A,T,C or G

<400> 889
nttctnnatn tattggntac gctggtctgg nananttgan cttnagnnnt acacnnactn 60
nngacntcca nggggnncnn attaccgnca tnanccaccn tnntgngnng nnnaanatng 120
cnnttnnaac aaacatnnna aanactcncc tgtggcattc gtttcctagg gctgcatanc 180
aaaataccac aaactggttg gcttacaaca tcatttagtt tcctacagtt ctggagactg 240
gaagtctagg cagcagggcc ttctgacctc tctcattggt ttatanatga aatgcctctt 300
ctccctgtgt ctttacaagg nctttctgt acctttctat gtcctaatct cctgttcctg 360
taaagacaca gttatattgg attaaggcac atccctagtg acttcatttt actttaa 417

<210> 890
<211> 468
<212> DNA
<213> Homo sapiens

<400> 890
ccgggcaggt accatgttca ggaaaccaag gacgatattg ctctactgtt ggaaacagag 60
taatcaaatt ttctgtgcta gccttaattc ctgccctctt taagaggagc ttaataaaat 120
gtaaatatgc agaatgttta cttttggatt gtcccatggt gtccctggaa tgctccgagt 180
gcacaagctt accgcaaggc cgaccacacg ttctcgggag ttcctggaca gaccgttctt 240
cacaacgacc acgctcaggt gtaacttcac ctgggttcaa ggagaccgtg ttgggtgcca 300
aagatgtagg ggaacctgcc tgatacacca cccgcaggct ctccccttcc cggtggagac 360
gagggaatga gaaaagaaat aaagacaaag acacaaagtt taagagttaa caaaagtggg 420
tccaaggatc catcgcaacg tggagattgc aaaggccccc gcgtacct 468

<210> 891
<211> 775
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 386, 391, 398, 404, 408, 409, 415, 416, 417, 427, 432, 434,
436, 470, 474, 496, 500, 513, 519, 523, 530, 535, 537, 555,
558, 561, 562, 564, 568, 570, 576, 579, 580, 604, 610, 627,
645, 657, 660, 666, 669, 674, 678, 697, 706, 714, 719
<223> n = A,T,C or G

<221> misc_feature
<222> 724, 725, 732, 733, 734, 735, 736, 746, 754, 760
<223> n = A,T,C or G

<400> 891
ccctttcgag cggccgcccg ggcaggtact ttctcttggt ctctgccatc acaatggcag 60
cccgggttcg gggttgaatt cccagcttaa gggatcatcc tttgtcttct gtttgtctat 120
gtatttatat gtagtatgtg tgtgtaatat aaaagaattt taattaattg ctttaataat 180
aataagctta aatcaaatat tttgtcacat aagtaaaaag tgtaatgcct tttagttcat 240
gtgacttaag taatctttgg gaaataaaaa cagttttaaa gattactggt aaaataaaga 300
catttggtct aaattatgca ggtcagatat taagtttgct aaatgcctta aggtcataaa 360
ctgctgcttt gacttttttt tttttngaaa naaaaccncc cccngggnna cagannnaaa 420
tttcatntcc tntnantaaa taattaaccc ctttttaaaa agtccaaaan cccncaaaag 480
tccaaaactt aaaaantttn aacactggac ccnaggccna agntaaaacn ttttncnttt 540
taaacctcct tgggnatngg nncnccantn aaaaangcnn gggaaaaact ttgttttttt 600
cccnaaaaan tttttaaaa atttttngta aaaattgccc ttttngggtt tttttngtn 660
aagggngtnt ttgnaaanaa aaataaaatt taaaagnttg gccccnttgg gggntttnc 720
cccnnggaat tnnnnnaatt ttgttngcca aaantttccn aaaaaaaaaa aaaaa 775

<210> 892
<211> 457

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32
<223> n = A,T,C or G

<400> 892
attggagctc cccgcggtgg cggccgcccg gncaggtacg cgggggagtt ctgctctgta 60
ctttgcccac ttgggttcta ttcttatctc ctcttagctt tggctctcca gcatggactt 120
tgcttgagtc tttgatcttg catcaactga tgtttctagt aagggccgac accacctctc 180
tcccagtgct gacagatgac atccctgctg agtcccgatt tccaccagct gtttagcgtt 240
ctggatcatt ccctgttgac cagctgcttc tggccatcct cacctggaca atctgcagta 300
gttttggcat gttgctcact gcttccattg gctgacggtt tgaagaagaa ctgaccagca 360
agtggttata tctttttgaa ggcagtggag tcccgtatgg cccaatcaac aacatgaaga 420
atgtatttgc agaacctcag gtattacaca atggcct 457

<210> 893
<211> 197
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 20, 24, 27, 35, 52, 69, 126, 142, 189
<223> n = A,T,C or G

<400> 893
ccctttcnag cggccgcccn ggcnggnaca gtgcntccca aagcccccag angcctaccc 60
ctgtcgccng tgtgcccaca atgaagaata tacagtcaag gaagatgatt ttgcagctct 120
aagatntaat ttctgccctg tnatctttat gacttgcatg aaccctcttg ctcttctctt 180
taagctgana tttccct 197

<210> 894
<211> 645
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 322, 331, 335, 344, 345, 349, 351, 355, 356, 359, 362,
363, 369, 371, 372, 378, 380, 383, 384, 390, 395, 396, 399,
401, 403, 407, 408, 414, 415, 416, 417, 423, 439, 451, 455,
470, 472, 477, 488, 489, 504, 528, 534, 537, 539, 541
<223> n = A,T,C or G

<221> misc_feature
<222> 542, 544, 552, 580, 587, 592, 593, 595, 614, 615, 616, 617,
618, 627, 629, 630, 634, 638
<223> n = A,T,C or G

<400> 894
ctacataaat gggggtttca cagttccgtt ctacaagcag ctcctgngga agccaatcca 60
gctgtcggac ctggagtccg tggacccaga actgcataag agcttggtgt ggattctaga 120
gaatgacatc acgcctcccg cgtggcgggc tgaggcctga gattccagaa accgagggaa 180
aaggctcgtc tccctcctcc tttggagagg gcaggccagg ggactttcct aggtggctcc 240
cacccattta ttctccttta ttatagtttg cccacccctc catcacccat ccaataaaac 300
gcagccaggt ttcgccctca gnaaaaaaaa ntttnacaaa aatnngggna naacnnaana 360

annaacctnt nnccaaangn ccnnttaaan ggccnnaanc ncnaaanngg cccnnnnggg 420
ggnggccgtt aaatttttna aaaaaaaaac nttcnacacc ctcccttgan cntgaanaaa 480
aaaagganng cacctggggg gggnaacttg tttttggccc ttttaaangg ttcnaantna 540
nncnatgctt tncaaatttc ccaaaaaaag cattttttn cccgggnttt tnntnggggg 600
ttggcccaac ccannnnngg tttttntnn tggntggnac ccccg 645

<210> 895
<211> 432
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 325
<223> n = A,T,C or G

<400> 895
ctgattggag ctccccgcgg tggcggccga ggtacccttt ctgcagaaag tataaaaatg 60
gccttgctaa ggaatttaaa tttacattca agtgctattt ctttacagca ccggaaaaca 120
agcatttcaa acaagaccta ctatacaatg acagtaatta agataatgtg atactggtgg 180
aggaataagc acgtagacaa atcgaacata atagagaacc cagaaataaa cccctacaaa 240
tatatacgca actatttttt aacaaagatt caaaagcaat tcagtggaga aaaaatgacc 300
ttttcaacaa ataatggtgg agcanttgaa catctacagc aaaaacaaag ctcaacttca 360
acctcacacc tgatataaaa catgaataaa aaactatgaa acttttagaa aaataaataa 420
ataaacctta gg 432

<210> 896
<211> 640
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 95, 98, 101, 103, 104, 105, 106, 107, 108, 120, 121, 125,
130, 140, 147, 148, 153, 154, 155, 158, 178, 186, 187, 188,
189, 190, 201, 202, 203, 204, 205, 206, 207, 212, 213, 214,
215, 216, 217, 218, 219, 220, 221, 233, 242, 243, 244
<223> n = A,T,C or G

<221> misc_feature
<222> 250, 251, 264, 266, 269, 277, 278, 281, 293, 294, 295, 301,
302, 308, 316, 321, 325, 326, 327, 328, 335, 348, 349, 359,
361, 362, 366, 370, 371, 375, 376, 377, 384, 385, 387, 388,
393, 398, 399, 411, 412, 415, 427, 432, 433, 434, 439
<223> n = A,T,C or G

<221> misc_feature
<222> 440, 442, 444, 456, 458, 465, 468, 469, 470, 471, 491, 495,
496, 497, 500, 505, 511, 514, 519, 522, 523, 524, 525, 528,
532, 533, 534, 535, 537, 552, 564, 565, 584, 598, 602, 603,
604, 606, 607, 608, 612, 616, 617, 618, 639
<223> n = A,T,C or G

<400> 896
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttttttt ttttnccncc nannnnnnaa aaaaaaaaan 120
ntttnggggn ggaaaaaaan ttttttnntt ttnnnggnaa aaaaaaaaaa aaaaaaangg 180
gggggnnnnn aaaaaaaaaa nnnnnnnttt tnnnnnnnnn nccccttttt ttnaaaaaaa 240
annnttttttn naaaaaaaaa aaananccnc aaaaaanngg nttttttttt ttnnnaaaaa 300

nncccccnaa tttttnaaaa ntttnnnngg ggggnaaaaa aaaaaaannt cctttttttna 360
nntggntttn ngggnnnagg gttnncnntt ttnccccnnc aaaaaaaaaa nnttnttttt 420
ttaaaanaaa annnacccnn tntntttggt tttttnanaa aaaanccnnn nccccaaaga 480
gggggggggg ngccnnnccn cttcnttttt nttnttttng gnnnngangg gnnnncncca 540
aaaaaaaaaa anaaaaaaaa aaanntttttt ttttgggggg gggntctttt tttttttnat 600
annnannncg gngggnnnaa aaaaaaaaaa aaaaaaaant 640

<210> 897
<211> 724
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 635, 679, 688
<223> n = A,T,C or G

<400> 897
aggtacattc tcacgaccgg cctgatccct gtgctggaga aagaacacga cccccgagtg 60
ataaccgtct cctcaggagg aatgttggtt cagaaactga acaccaatga tctccagtcc 120
gaaagaacac catttgatgg aactatggtc tatgcacaaa acaagaggca gcaagtggtt 180
ctgacggagc ggtgggccca agggcacccg gccatccatt tttcttccat gcatcctggc 240
tgggccgaca ccccaggtca gacaggaatg agcaggagct gaggaaggta gtgggagagg 300
cccagactgc ctcaccactc cccaggtttt tggaaataat gatgcatgaa ggtaaatgcc 360
agccacaagg acacagctcg aatgatctgg aagcgtgttg gagcagcggt ggaggggagc 420
agaattctct tccggattgg cctcaccaac tccatgacct caggcagctc acctgggctc 480
tctgcagctc tttcctcctc tacaaacaag ggaactgaaa gcagcaacag ccacagcaca 540
cacccccaggg tgcacccgcg ggcgccaaag aactggtctc aagcgcttgt cttgcggatt 600
aacgcatttt gtcctcaagc cctctgtgga gtggncctac tgtcttttat cacacccatt 660
tacagatgaa gggactgang ccccaaanag cttaaaactt ccaacccggc ctggccatgg 720
ggtt 724

<210> 898
<211> 379
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 130, 233
<223> n = A,T,C or G

<400> 898
ccgggcaggt acactcatat ggttttactc cggcagtctt cttcgtcaca ctgagattgg 60
gactgaagtt ttctgcacat tgactacctt ctttaccttc acagagtctc tctcccgtat 120
ggcttcttan atttcgtcct tggtttttgt gttgatcttc aacattcggg tcttcccatt 180
tttcccctat agatgccagg ttcttgaatg tttcctgcat cacatctctg tanagtttct 240
tctgtgaagg agccagcaga gcccactcct cctggctgaa gctcacagac acatcctcaa 300
aagccactga gtccattttc cggcctcgcg ggtgtcccgg tgttgtccct aaggttcacg 360
gagccagcgc agggtacct 379

<210> 899
<211> 469
<212> DNA
<213> Homo sapiens

<400> 899
attggagctc cccgcggtgg cggccgaggt acaaacttgt ttccaggcaa acttgtccaa 60
cccatggccc acgggctgca tgaggcccaa cacaaattca caaactttct taaaacatta 120

tgaaattttt ttggtgattt ttttagttca tcagctattg ttagtgtatt tcatgtgtgg 180
cccaagacaa ttcctcttcc aatgtggccc agggaagcca aaagactgga cactcctgtc 240
ctagaatatt taatttgggt ctgccagaga ggttaaaaga atcgtaactt tttaaaaagc 300
ctgtaatttt atttttattt ttactagata tggggtcttg ttatactaac ccaggctagt 360
ctcaaactct tggcctcaag aaatcctctc acctcggcct cccaaaatgc tggaaataca 420
ggcatgagga accacaccca gccagcctac aattttaaaa cctaaggca 469

<210> 900
<211> 371
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 346, 361
<223> n = A,T,C or G

<400> 900
cccttagcgg ccgcccgggc aggtacgcgg gggctgctgg aaacgcagtt ccggttaggc 60
ggctgagttt gtttacgttg ctaacagatc tagcccctgc tttccctagt tccagttcca 120
agatggggaa atccttcgcc aacttcatgt gcaagaaaga ctttcatcct gcctccaaat 180
ccaatatcaa aaaagtatgg atggcagaac agaaaatatc atatgataaa gaagaaacaa 240
gaagaattga tgcagcaata tcttaaagaa caagaatcat atgataatag attgcttatg 300
ggagatgaac gtgtaaagaa tgggccttaa tttcatgtat tgaagncccc cccaggagct 360
naaaaaaagg a 371

<210> 901
<211> 229
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 213
<223> n = A,T,C or G

<400> 901
ccgggcaggt acgcgggcgt gggggtgagg gttgagaacc tatgaacatt ctgtaggggc 60
cactgtcttc tccacggtgc tcccttcaag ccaacaaggc cacactggtg tgtctcataa 120
gtgacttcta cccgggagcc gtgacagtgg cctggaaggc agatagcagc cccgtcaagg 180
cgggtgtgga gaccaccaca ccctccaaac aangcaacaa caagtacct 229

<210> 902
<211> 172
<212> DNA
<213> Homo sapiens

<400> 902
actttggcct ctctgggata gaagttattc agcaggcaca caacagaggc agttccagat 60
ttcaactgcc catcagatgg cgggaagatg aagacagatg gtgcagccac agttcgtttg 120
atttccacct tggtcccttg gccgaacgtc cacggagtag tataatattg ct 172

<210> 903
<211> 77
<212> DNA
<213> Homo sapiens

<400> 903
tcggtcaggg accccggatt cccgggtaga tgcccagtaa atgagcagtt taggaggctg 60

tcctggtttc tgctggt 77

<210> 904
<211> 279
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 160, 237, 272
<223> n = A,T,C or G

<400> 904
gcgcccggca ggtgatacct ccgccggtga cccaggggct ctgcgacaca aggaagtctg 60
catgtctaag tgctagacat gctcagcttt gtggatacgc gggactttgt tgctgcttgc 120
agtaacctta tgcctaacaa catgccaatc tttacaagan gtgaagtaaa acttttttta 180
agaattttta aaaatacttt gattcccttg gctacaggtg atgtcttctc ttggaanggg 240
aagaaattac cattaatatt gaccattcct anattccca 279

<210> 905
<211> 386
<212> DNA
<213> Homo sapiens

<400> 905
aggtactgag gatgaatttc atgccactgg cctccaaaaa acccactgga aacattgcac 60
gtggagtagc tgtctgtcca ggctggcggc tggtgaagga ggttgttgcc ggggttgaga 120
ttcattacac cacctccttc cagaatcatg atcttgagag gtcttgatga aggctaccat 180
cttgcgcagt catgtaagag aacttacagc acagctgttc cctcaaagtg actttcattt 240
aaaatgcctc tcatttacct aaagattctg ggtgggaaat ccaatagctg tggctgatgg 300
aggggaggca gcaggctgca atctcaccag ctcctatagg gatggggcac cacgggcgtt 360
atcaagtctc cccgcgtacc tgcccg 386

<210> 906
<211> 326
<212> DNA
<213> Homo sapiens

<400> 906
cccttagcgt ggtcgcggcc gaggtactac tgtgtgttga ctcttgtaaa tcctcccagt 60
gaagagtcat caaacctggg agtggtcttg gggccctgac ataccacttc atggagctgg 120
tgatggaaat ttgctgatgt tgttggccac ccgaatgagc atgcgagccc ctttcatgtg 180
atctccattt ttaacatgaa tctttactag tatatagctg tgcagaatca tgaggttggt 240
ggccatctcg gagggaattt tgatcttctg ggatttcagt tctgcataca tactgaagag 300
aacatcgtgt gcattccggt agttgc 326

<210> 907
<211> 506
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 155, 165, 395, 469, 472, 487, 494
<223> n = A,T,C or G

<400> 907
ccctttcgag cggccgcccg ggcaggtacc cactcacagt gatgccagca agaagagact 60
gattgaggat actgaagact ggcgtccaag gactggaaca actcagtctc gctctttccg 120

aatccttgcc cagatcactg ggactgaaca ttgtnagtga acttntaggt atcctaatgg 180
atgaatgttt ttttgcccca gagagtggca ttgaaactga ttggtagttg tcagaaaaca 240
accccgagac agtttgcttt taaattatgc tgtgcataac atgggtaata taaataagac 300
cccaggccgg gcacagtggc tcacgcctgt aatcccagcg ctttgggagg ccgaggcagg 360
cagatcatga ggtcatgagt tcgagaccag actanccaac atggtgaaac cccgccttta 420
ctaaaaatca aaaattattt gggcatcgtg gaaacccctg taatcccanc tntttgggag 480
ccttgangca gganaatcat tttgaa 506

<210> 908
<211> 495
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 56, 63, 72, 120, 128, 131, 140, 159, 174, 194, 239, 263,
284, 303, 317, 319, 328, 341, 354, 358, 369, 384, 385, 389,
395, 401, 415, 422, 450, 457, 466, 474, 477, 480
<223> n = A,T,C or G

<400> 908
caccgnggtg gcggccgagg tacttttttt tttttttttt tttttttttt tttcgngctc 60
cancaatttt tnttttcatg aatgaaagtt ggggatcagc tgttaggttc tgtgcccagn 120
acactgantg ntgcctggcn cccacttttt atacagtcnt taacagcaac tccntcatag 180
gaggctccag ccanagtcag gggcaacctg tgagcagtca ggaattgcct agctgactnt 240
agtttttgcc agtggaccct agngtatact ggggaatgca gttnttgtgt agatggacca 300
agncagttgg ctcggcntnt ccttaaantc ctaaatttgg ngtaagcaag ctgnttcnct 360
gggccccgnt tgtttgaaaa caannttcnc tgganaataa nacacaagcc cactnagccc 420
tncaggtggt cctggtaacc aggaaaaccn tccccangcc atcacnagtt cacnttnttn 480
gaggggccca ggggg 495

<210> 909
<211> 434
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 88, 140, 261, 269, 304, 343, 349, 407, 434
<223> n = A,T,C or G

<400> 909
gattggagct ccccgcggtg gcctggttag caaatgtttc ttcctccctc acaggctata 60
agagcaatga gctggcaacg cccctganca cactgtctgc tggttaacca atggcatgtg 120
agaggaggga cagaggcagn cttacacaag ctgtgataaa aattgcatcc agttcaaccg 180
tttcttacct gtggaaaaga agtttctgta tggaactgaa gttaaagtca cattgatttc 240
agagtggatg gtataactat nggatgcant atgtcattcc aatggtaaca tcatgaagga 300
aggngaaggg gaagtaagca tgtcttcact tggctggcag ganagggana gggagagaga 360
gagaaggtgg aggtgctaca cactttcaaa caaccagatc tcatganaat tctattatga 420
gccccgcgta cctn 434

<210> 910
<211> 476
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 324, 337, 346, 454

<223> n = A,T,C or G

<400> 910
aggtacacgc tgggggacgc tcctgactat gacagaagcc agtggctgaa tgaagaattc 60
aagctgggcc tggactttct caatctgccc tacttgattg atggggctca caagatcacc 120
cagagcaatg ccatcctgcg ctacattgcc cgcaagcaca acctgtgtgg ggagacagaa 180
gaggagaaga ttcgtgtgga cattttggag aaccaggtta tggataacca catggagctg 240
gtcaagactg tgctatgacc cagattttt gagaaacctg aagccaaaat acttggaggg 300
aactccctgg aaaaagctaa agcncttact caagagnttt ctgggngaag cgggccatgg 360
tttgcaggaa gacaaggatc accttttgtg ggatttcctt gccctatgaa tgtcctttgg 420
acatgaaagc cgttattatt tttgagcccc aagntggctt tggaaccgcc ctttcc 476

<210> 911
<211> 410
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 326
<223> n = A,T,C or G

<400> 911
attggagctc caccgcggtg gcagcggccg cccgggcagg taccacttct gccctcagat 60
ggtttgaact ctcctaagcc aagaggctgg aatgactgag ttgtccaaac agcaaagatg 120
gtggctcgtc cctacccctc ggcactccat cccaaggaga aatcaaaact ctgtctgcca 180
gagaatatgg gtggggttgg ctggaggcct tggttgggag gccctgccct aagatgagga 240
atggatcagg tcccacttaa agaagcagtc tggccatgtt ttggtagaac agctgtgctg 300
tgctgggagg tcccatcagt tctcanttgg tgtggtttgg actctcctac acccacatgc 360
tggaatggct gagttgtcca aacagaaaag atagcggctt gctccttccc 410

<210> 912
<211> 594
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 223, 254, 263, 334, 363, 397, 407, 422, 425, 436, 515, 546
<223> n = A,T,C or G

<400> 912
cacaaggtgc attctgcttc ctgcaggggc ttgaaacacc aaggcactcc agggatcctg 60
gagtcaaagc agcagccccg gtatgttgca ctccttgggg gtgacatggg ggtagccgca 120
gtccaccctg tccttggctg gcacggcaca ctggtttgca gacaggccca cgtactcctc 180
agcagagctg gagggacaag caaggccagg accagcccca gcnatgccag agcgctctgg 240
cagccatgac cacncgttgg ggnctcccgg ggacgccaag ctcaggactc ccgcgtacct 300
tgccccgggg ccggcccgct cttagaaact aggngggatc cccccgggct tgcaagggaa 360
atnccgatat tcaaaagctt tatccgatta cccgtcngac cctccgnagg gggggggcc 420
cnggntaccc caagcntttt tgtttcccct tttaaggtgg aggggtttaa atttggccgc 480
cgcctttggc cggtaaattc aatgggtcca ataancttgt tttcccttgt tgttgaaaaa 540
atttgnttat tcccgcttca acaaattttc caacaaccaa caattaccga agcc 594

<210> 913
<211> 766
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 2, 3, 602, 695, 715, 721, 736
<223> n = A,T,C or G

<400> 913
cnnattggag ctccaccgcg gtggccgagc ggccgcccgg gcaggtactt ttgtatgaca 60
ctagacttct gctgtagtgc ttcacccaaa acagaggttt aaggaaataa aaaaataaaa 120
ataatacaga aaaaaaacca aaacacttta ctgaaaattt tcatttcaac cagaagcaaa 180
cgtgttctaa gaaggcaaag tagagttagg aacaactccg tgtttccctc aggaataaac 240
gtgatctttc acacttgggg gttgatagtc agcatggagt aacttagacc aacttaagaa 300
ggaggcatct ggggctgttc acctaaggag atgcttccca gaggcccagc atcttgggag 360
aacaccccaa gttctctgga gaggtcagga gtttgggatg caggatcaca ctgaaggtca 420
gcccagcaaa gcagctgatc taggatatgg gcttctgact tccagattct accatcatca 480
cagaggctca aagctggggc ccacaccaaa agggcgtgat gattcccagc cttcagcaca 540
acaggaattg acctggaaag aaaggccttt attcctctga cagaaaaacc tgattcccaa 600
angaaaatga tacttttacc ttattccctt tctcaatgga tctgcatttt catgaatgaa 660
gaaaagaaga aagttgaatt ctctgactta ggaangtttc ttattaaaaa ggttncaata 720
nacttcaact tttttnaagc tgggcagcaa aaaaaaaaaa aaaaaa 766

<210> 914
<211> 570
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 431
<223> n = A,T,C or G

<400> 914
gaattggact ccaccgcggt ggcggtacag cttggagtga tccccccacgg tttcaatttt 60
aaacctctca tcatctgaaa tctcctcgta ggatttacac caggtgaact gagacgcgtc 120
tgtcatttcc tggcagtcga agcccagata gatgttgcct tgttcatcga caccagcact 180
gatttccttg gtgcctggtc tcgcctctac caacacaggc tccgacgtgt ctgagggctt 240
ccccacgcca tttgcattga ctgcccggac cctgaagaca taggtcttac cttgctgcag 300
gtcagaagac ctttaaaata acggtttggc tgttggtcgt cctgattgac aggtgatcca 360
ctcctccagc cattccctcc tccctggaag tccaccgaaa tatccagaaa acagggcttg 420
ctgccgggag ntacctccgg ccgctctaag aactaagtgg gatcccccgg gctgcaggga 480
attcgattat tcaagcttat cgataccggt ccgaccttcg aagggggggg gccccggtac 540
cccaagcttt tggttccctt ttagtggagg 570

<210> 915
<211> 415
<212> DNA
<213> Homo sapiens

<400> 915
aggctaaggg aggctatggg aggctaaggg aggctcaggt aaggaggatc tcttgagcct 60
gggaggcaga agctgcagtg agccaaaatg gcaccactgc actccagcct gagtaacaga 120
gtaagactct gtctcaaaaa aagaaaagaa aagaaaaaaa gaattcaaag gagaactgac 180
atatcaccca gtgggtatat tacagaatgc ttgcatgtat gtgtgtgtgt gtatggtttt 240
atatatattt atataaagta taaatgcttt tgcttatata tatgaatctc attttcccac 300
tggctttcct taaaaactaa acaaaacaca aacaccttac tgatctttag tagctcgtaa 360
gctgattttt agcctttcag ctgagaggaa atggtccaaa aaaaaaaaaa aaaaa 415

<210> 916
<211> 487
<212> DNA
<213> Homo sapiens

<400> 916
tgattggagc tccccgcggt ggcggccgag gtacatgcat tgggattcat caaggaaaca 60
aagctggacc aaagatggct gactagaagc agtgaggact cttggctctc atggagagaa 120
atgaaagggg caagtaaata cagcaacttc aactgaaaca ttcatgttct cacattgaga 180
ctgatcaggg aaagagctca acccatgcag aaaggagaaa agcaaagcag ggcgacagcc 240
cactaggaag gacatggagc caagggaacc tctccctgcc caggcaaaca gtgaatgaat 300
atgtgacccc tagcaaccgc acttcttcca tggacctttg caactcttgg gtcaggagat 360
cccctcatga atccactcca ccaagacttg gtctgacaca caaagctgca tgaagtctct 420
gctaagcaac tgcccagggg tgcacagagt cccaggagct ttacatactc tggccccagg 480
atccctg 487

<210> 917
<211> 389
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 52, 58, 59, 62, 63, 64, 73, 78, 79, 80, 91, 92, 93, 95, 110,
111, 113, 114, 116, 117, 118, 128, 138, 139, 140, 141, 144,
145, 149, 150, 151, 160, 172, 178, 185, 190, 199, 201, 204,
205, 206, 207, 210, 211, 214, 216, 220, 225, 228
<223> n = A,T,C or G

<221> misc_feature
<222> 234, 242, 247, 248, 254, 255, 256, 257, 258, 259, 260, 262,
263, 266, 267, 268, 270, 272, 297, 298, 299, 305, 308, 309,
312, 319, 324, 329, 330, 331, 332, 333, 334, 342, 346, 363,
365
<223> n = A,T,C or G

<400> 917
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttttt tngggggnng 60
gnnnaaaaaa aantttannn tggggaaaaa nnncnaaaaa aacccccccan nanntnnntt 120
ttttttttnaa aaaaaaannn naannttttnn nttttttttn aaaaaaattt tncccccngg 180
ggggnttaan ccccaaaant naannnnccn nttngnaaan cccanggntt tttnttttttt 240
tnccccnnaa attnnnnnnn cnnggnnngn cntttaaaat tttttttttt taaaaannna 300
aaaanttnnc cnaaagggnt tttnccaann nnnnaaaaaa angggntttt tttaaaaaaa 360
aancnttttt tttttttta aaaaaaaaa 389

<210> 918
<211> 260
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 5, 34, 36, 38, 39, 40, 45, 46, 47, 48, 49, 72, 73, 74,
77, 79, 81, 91, 92, 107, 111, 114, 116, 117, 125, 126, 146,
151, 152, 158, 159, 165, 166, 168, 169, 170, 192, 208, 214,
215, 230, 234, 235, 236, 253, 254
<223> n = A,T,C or G

<400> 918
ancnncaaaa aaaaaaaaaa aaaaaacccc cccncncnnn ggggnnnnna aaaaaaaaaa 60
aaaaaaaggg gnnnggngng naaaaaaaaa nngggggggg ggggggnccc ncananncccc 120
ccccnngaaa aaaaaaaaaa aaaacncccc nngggggnna aaaannannn tttttttttt 180
tttccccccc cnggggggggg gggggggncc cccnnttttt tttttttttn aaannngaaa 240

aacccccccc ccnnaaaaaa 260

<210> 919
<211> 360
<212> DNA
<213> Homo sapiens

<400> 919
ccctttcgag cggccgcccg ggcaggtacg cgggaatgtc attatgtgac aaaccaattt 60
ttttgtgcct ctgtttcctc atttgtgaaa attggactaa ataatcttta aggtctcttt 120
ttcttttgca gttctaatat cagttccttg cgcattttat attcattttg aaaagtaatt 180
tataagtatt agtaactaga agaacctttt attctaaaat tttaatattt aaaaaaaaac 240
acccccccaa aaaacaagtt caatgtgagg agccagaatc tatcatttgt aagttaaggc 300
taaatacaga ttctgaattt gaggtgcttt aaggaaatga aaaaaaaaaa aaaaaaaaaa 360

<210> 920
<211> 350
<212> DNA
<213> Homo sapiens

<400> 920
aggtacgcgg gggaaagtgt gtagcacctc caccttctct ctctctctcc ctctccctct 60
cctgccagcc aagtgaagac atgcttactt ccccttcacc ttccttcatg atgttaccat 120
tggaatgaca tactgcatcc tatagttata ccatccactc tgaaatcaat gtgaatttaa 180
cttcagttcc atacagaaac ttcttttcca cagatggagt ttaagcccaa gctggagtgc 240
gatggtgcaa tcccaactca ctgcaacctc tgcctcccag gttcaagcta ttttcctggc 300
ttagcctccg gagtagctgg aattacagat gtgcgccccc atgaccagta 350

<210> 921
<211> 253
<212> DNA
<213> Homo sapiens

<400> 921
ggtactgagc tccacaaacg tggccatggt tggtgcggaa atgattctga gtgagcaggt 60
agaagtctca cgtcctgctg tgtccagagt tggttccttc cagagggttc gtggtctcgc 120
tggcttcaag aatgaagccc gtggaccttc acagtgtgtg ttacaagctg ttaaagatgt 180
tgtgtctgga gtttgttcct tcagatgtgt ctggagtttc tcccttctgg tgggtttgtg 240
gtgtccctga ctt 253

<210> 922
<211> 359
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 23, 25, 26, 28, 32, 37, 40, 42, 45, 48, 52, 57, 67, 71, 75, 79, 83, 86, 105, 112, 116, 122, 124, 132, 134, 139, 140, 143, 144, 147, 156, 168, 179, 186, 198, 204, 207, 219, 222, 227, 242, 243, 279, 288, 292, 308, 313, 314, 320
<223> n = A,T,C or G

<221> misc_feature
<222> 321, 328, 333, 347
<223> n = A,T,C or G

<400> 922

actttttttt ttngtttttt ttngnnanta cntcccnggn tnggnagngg gnaattngcc 60
cccctgntgc nttcnttgna tgnggnaccc gtttttaagg ctccntttcc gnaatnaaac 120
cntnattccc cntnacccnn ggnnacnatg gtaggnacgg caactacnat caaaagttna 180
tagggnaaac tttcaaangg gtcntcnccg cccccgctna cntgccnggg cggccgcccg 240
gnnaggaact tttttttttt tttttttttt tttttaaana aaaaaaancc cnttttttttt 300
ttttttttngg ggnngggggn naaaaaantt ttngggggg ggggccnttt tttttaaa 359

<210> 923
<211> 434
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 67, 115
<223> n = A,T,C or G

<400> 923
ccccgcggtg gcggccgagg tacaggtttg tagccaaaaa gcaataggct ataccataat 60
agtgcangtg cgtataaggc ttttacataa aggttttatg acctgtatga tgttnacaca 120
acaacaaaat tgcctagtgg tgcatttact ataacatatc ccatccttaa gggacacgtg 180
aatgtatata cacacacaca catatacaca tattaccaaa tggatacata cgtggttacc 240
tacagaaaaa tttaaacttt gaaataatac tcttagggaa tgttaccttt ttaaaagata 300
ttctttaaat ttatatttgc tattatgtgc cttaccaata ttcacatgta acattgccat 360
ttcactaagg gatttttttat attagcattt taatcagcac atttggtggt ctgtttaccc 420
tgtgttatga gtta 434

<210> 924
<211> 292
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 8, 29, 47, 49, 52, 55, 74, 104, 112, 151, 156, 157, 158,
163, 172, 186, 192, 229, 230, 236, 259, 286
<223> n = A,T,C or G

<400> 924
aaattcnntg cgctactacc acctgctgna catggagtcc ctggccncnc anatncatgg 60
cgtggagttt tcgnagtggc tgctgaaaaa actcaaaccg aacnaagcgc tnttccgcct 120
ggccgaggaa acgggcgtca tcctgttgcc nggccnnngc ttnaggacca cncatccgtc 180
cggccnttgt cnctggccaa cctgaacaaa taccactatg ccaacatcnn gccgcnccat 240
ccgcaacatg gcgtccgant tctttgccgt gtttgaaaag gaaaanggcg gc 292

<210> 925
<211> 364
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 45, 86, 108, 237, 245
<223> n = A,T,C or G

<400> 925
gacacgcttt ccttgaactg aaatttcccc ataaagaaaa accanatttg gagttcgttc 60
ttgaaatgtc ctcaccacaa ctgatnaaaa cacatctccc ttcacatntg attccaccat 120
ctatctggaa agaaaactgc aagattgtct atgtggccag aaatcccaag gattgcctgg 180

tgtcctacta ccactttcac aggatggctt cctttatgcc tgatcctcag aacttanagg 240
aattntatga gaaattcatg tcccggaaaa gttgttggcg ggtcctggtt tgaccatgtg 300
aaaggatggt gggctgcaaa agacatgcac cggatcctct acctcttcta cgaggatatt 360
aaaa 364

<210> 926
<211> 558
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 52, 65, 79, 86, 95, 100, 121, 139, 162, 165, 182, 203,
274, 296, 308, 313, 334, 338, 343, 344, 362, 375, 399, 412,
415, 419, 435, 443, 471, 485, 494, 499, 502, 509, 517, 521,
525, 539, 540
<223> n = A,T,C or G

<400> 926
aattggagct ccccgcggtg gcggccgagg tactgaactc cacaaacntg gncatggttg 60
gtgcngaaat gattctgant gagcangtaa aattntcacn tcctgctgtg tccagagttg 120
nttccttcca aagggttcnt ggtctccctg gcttcaaaaa tnaanccggg gaccttctca 180
gngtgtgtta caagctgtta aanatgttgt gtctggagtt tgttccttca aatgtgtctg 240
gagtttctcc cttctggtgg gtttgtggtg tctntgactt caagaattaa cccggngact 300
gtcgtggnga tcnttgtagc tcttaaaggg gggngtgnac ccnnaccagt gggcatcagc 360
angatttttc gtcangaggg taagaacaaa gtttccacng tgtggaaggg tntcntganc 420
ggttccctgc tcccntgtac ctncccgggc gggcgatcta aaactattgg ntcccccggg 480
ctaanaagaa ttcnatatna ancttatcna ttccgtngaa ncttngaggg gggggcccnn 540
caacccaggt ttttgttt 558

<210> 927
<211> 492
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 115, 128, 154, 158, 172, 184, 186, 188, 189, 211, 225,
227, 230, 233, 244, 251, 253, 254, 260, 261, 266, 270, 272,
275, 287, 288, 294, 296, 307, 316, 317, 321, 326, 335, 336,
361, 368, 370, 375, 378, 381, 402, 420, 426, 434, 443
<223> n = A,T,C or G

<221> misc_feature
<222> 450, 452, 456, 460, 465, 469, 484
<223> n = A,T,C or G

<400> 927
ccctttcgag cggccgcccg gncaggtaca gtctctgctt cactcctggc tacacaattg 60
aaaggcgcat tggaggactg attttccctc cttcctacat acctatttgt tatgntcaaa 120
aattaaantt gatcaaatgt acttttcatg gtantagngg ttaaaataac antgagtctt 180
atgntncnnt tattttattg aactttattt nggtttttct caaanantgn tgntggatta 240
attnaaatta nannttgtgn ntattncatn gnttnttttt aaccagnntg taanangttc 300
tttttangtg gtaaanntac ntctcnacct ttaanncttt taattttatg tatgtaaacc 360
naaattgngn gtgtnaanaa nggccttgga acccatttaa tngggtcttt taatagtccn 420
caaaanaacc ttcnctttgg gtnaggttan tnttcnaaan ttttnttcnc tttcaaatcc 480
ccanttttct tt 492

<210> 928

<211> 331
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27, 35, 122, 125, 131, 137, 138, 139, 140, 148, 154, 155, 169, 170, 174, 188, 190, 196, 197, 207, 209, 210, 211, 215, 216, 220, 222, 225, 235, 236, 237, 238, 239, 243, 244, 256, 268, 275, 277, 289, 290, 292, 293, 297, 313, 315
<223> n = A,T,C or G

<400> 928
```
acttttttttt ttttttttt ttttttnaaa aaatnttttt ttttttttt ttttttttt 60
ttttttttt ttttttttt ttttttttt ttttttttt ttttaaaaaa aaaaaaattt 120
tntanatttt ncccccnnnn cccccccntt tttnnggggg ggggggggnn aaanaaaaaa 180
aaaaaaantn tttttnnaaa aaaaaancnn ntttnngggn gnacncaaaa aaaannnnng 240
ggnnaaaaaa aaaaantttt ttaaaacntt ttttncntca aaaatttann cnncccnaaa 300
aaaaaaaaaa acncnttttt ttttttaaaa a                               331
```

<210> 929
<211> 422
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 28, 179, 190, 195, 201, 204, 225, 228, 332, 340, 355, 404
<223> n = A,T,C or G

<400> 929
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ccccttagcgt ggtcgcggcc gaggtacncg gggaggccat ctcgctatag gaaaggaaag 60
tggaacagca ttcatcctca acatttttac gaagacaaaa tgaagactgg agtagaagac 120
tgatcagtgc aggtgtagca taaaagtgta atcctggaag atgtggtgtg agaaggtanc 180
acaagtgaan caganataca nganataggg aagggaagct ggaancanag gtcactggag 240
ggagagggag atgggcacat tcagggctac aaagcaaagt tctatgtgat ttactcacct 300
ctcaattgtg ggacccctca aaatgtgtac angtactctn ccagtgacat gcttnttgac 360
cacaatggat gaactgtgcc cagcatgccc acttttcaat gctncacttg atccccatgt 420
tt                                                               422
```

<210> 930
<211> 487
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 20, 74, 75, 119, 121, 167, 168, 169, 171, 180, 181, 188, 190, 191, 192, 193, 195, 196, 197, 198, 206, 207, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 221, 222, 241, 244, 259, 260, 261, 262, 270, 271, 272, 284, 285, 286
<223> n = A,T,C or G

<221> misc_feature
<222> 287, 288, 289, 290, 293, 294, 300, 301, 302, 317, 318, 325, 327, 335, 345, 352, 353, 354, 366, 368, 369, 372, 375, 381, 387, 391, 406, 417, 418, 422, 424, 428, 432, 433, 434, 439, 442, 459, 460, 461, 462, 463, 464, 471, 474, 475, 479
<223> n = A,T,C or G

<400> 930
ngaaactact actgagggcn aattggagct ccccgcggtg gcggccgagg tacttttttt 60
tttttttttt tttnnttttt tttttttttt tttttttttt tttttttttt ttttttttnt 120
nttttttttt tttttttttt tttttttttt ttttaaaaaa aaaaaannna nttttttttn 180
naaaaaanan nnncnnnngg gggggnnann nnnnnnnnnt nnttaaaaaa aaaaaggggg 240
nagnaaaaaa aaaaaaaann nnttttaaan nnggggcccc cccnnnnnnn ttnnataaan 300
nnaaaaaaaa aaaaaanntt ttttnanccc ccccngggggg ggggnttttt tnnncccccc 360
cccccncnnt tnttnttatt naaaaanaag nggccccccc cccccnaaaa aaaaaannaa 420
tntnactnaa annntgggnc cncataaaat aaaaaaaann nnnngccccc nctnnggana 480
aaaaaaa 487

<210> 931
<211> 322
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 68, 94, 95, 167, 171, 172, 173, 186, 192, 207, 211, 214,
218, 219, 227, 229, 230, 233, 237, 242, 245, 248, 259, 261,
262, 264, 265, 266, 271, 274, 279, 280, 282, 283, 287, 289,
291, 293, 296, 297, 298, 301, 303, 306, 312
<223> n = A,T,C or G

<400> 931
gggcgaattg gagctccccg cggtggcggc cgaggtacgg gaaggtgaaa aaaaaaaaaa 60
aaaaaaancc cctttttttt tttttttttt tttnnttttt tttttttttt tttttttttt 120
tttttttttt tttttttttt tttttttttt tttttttttt ttctttntct nnnttttttt 180
tttttnttct tnttttttttt tttttangta nccnccccnnc ccgcccnann tcntttnttt 240
tnttnccncc cccccccna nntnnntttc nggnggggnn tnnctcncnc ntnttnnnca 300
ncnccncccc cngggggggg gg 322

<210> 932
<211> 225
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 51, 91, 92, 93, 94, 105, 106, 107, 119, 120, 121, 125,
126, 129, 130, 132, 133, 136, 137, 139, 140, 143, 158, 166,
167, 177, 178, 187, 188, 192, 194, 195, 199, 206
<223> n = A,T,C or G

<400> 932
aggtacgcgg gggttgtgat gttttttttt tttttaaaaa aaaatccnaa ntttttaaaa 60
aaaaaaaaaa aaaaaaaaac cccccccccc nnnnaaaaaa aaaannnccc ccccccccnn 120
naaannaann tnnaanntnn ttnaaccccc cccccccngg gggggnnccc cccccnnct 180
ttttttnntt tnannaaana aaaaanaccc cccccccaaa aaaaa 225

<210> 933
<211> 285
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 59, 67, 69, 73

<223> n = A,T,C or G

<400> 933
gatatctgca gaattcgccc ttagcgtggt cgcggcccga ggtacttttt ttttttttnt 60
tttatantng ttnggggtct tatatgcgct atgaatatga atatgacagc ttcacggctc 120
caacgtaatt atagaaaata aaaataatat gacattactt tggcaggcag gcatacattt 180
tcatttaata tgacacaata agattactac tttctcccaa aagttaactc ctattgccaa 240
taaaaactta cttctagttc tttaattttt tcttctgcta ttttc 285

<210> 934
<211> 453
<212> DNA
<213> Homo sapiens

<400> 934
ccctttcgag cggcccgccc gggcaggtac tgggattaca ggtgtgagcc accatgcctg 60
gcctgtaaaa ctcactttca ataccaggga taagaggagg ggctaagtga agaagaaatt 120
acttgaaaag cctaagaaaa ccagatctat gcttactgca aaacttaatt ctgaaaatgt 180
tttagtaatt aaatctggct gttcagttga gagaagaata tgaaacgatg aggagtctct 240
gaatttggaa tctacacaga atggtggatt tagaagcata atagaaatca gtgcatctta 300
ttagctgcct tggttctttg attgttttct tcgggttcca agaattttta ggatctgaaa 360
atcacgacaa accaaaacag agagagataa atctgtgcag aaaacatcaa atctatggcc 420
acccgcgtac ctcggccgcg accacgctaa ggg 453

<210> 935
<211> 421
<212> DNA
<213> Homo sapiens

<400> 935
ccctttcgag cggccgcccg ggcaggtaca aggcatgatg agtccttttg cttttaggct 60
tttgacttct ggttttagac tttctttagc ttctgttgtt agacaacatt gtgtaagctt 120
ggtttttata agtttgcatg gattaaactg aacttaatga aattgtccct ccccccaaat 180
tctcagcaca atttttaggc ccacaaggag tcaagcacct caaggagatc ttcagtttga 240
acttggtgta agacacaggg atactgatga atcaatattc aaattagctg ttacctactt 300
aagaaagaga ggagaccttg ggatttcga ggaagggttc cgtaagggag attttagctg 360
agaaatacca tttgcacagt caatcacttc tgaccaaagt tatcagaaaa aggagaaaaa 420
g 421

<210> 936
<211> 557
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 370, 392, 447, 454, 504, 545
<223> n = A,T,C or G

<400> 936
ccctttcgag cggcgcccgg gcaggtacgc gggggccata gtgaagaagg aactgctgtc 60
tgtggtggct gggggagaca actacagggt caataacaag cacgatgaca gatacacacc 120
actgccttcc aacaaaatcg tcaagcgggc agaggagttg gtggggcagg agttgcctta 180
ttcgctgacc agtgacaact gcgagcactt cgtgaaccat ctgcgctatg gcgtctcccg 240
cagtgaccag gtcactggtg cagtcacgac agtaggtgtg gcagcaggcc tgctggctgc 300
cgcaagcctt gtggggggatc ctgcttggcc agaaagcaag cgggaaaggc aataaatcca 360
agaaattgtn ccaacaacca ccaattctta cngaggaata ttatttaacc agcaaggagt 420
ggaggtttgg tttactgatt ttactgnttt gggntcatga aattttattt taatgggagt 480
taaaaacaca ggaaaatgta tttngaaatg caacttaata ttgaattttt taaaagacac 540

aattnggctt ttggaaa 557

<210> 937
<211> 624
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 76, 79, 395, 418, 486, 493, 553, 567, 573, 579, 596, 600
<223> n = A,T,C or G

<400> 937
ccctttcgag cggccgcccg ggcaggtact ggatcagttt ctcctgcgtg aggtatgggt 60
gacactcaac ctgcancanc aaacaatcct catcacgggg aaagccggct ctgttttgca 120
ttgttcctag ggagttctgg ttaagtcact ggtttatatt tcaagtccag gtttgttcaa 180
gagcctctcg atctggaagt ggttgaaatt tgagacccca agggctttca ccagcccctc 240
gtccaccagc tcctccatgg cctccaggca tccaagaacg ttccttttcc actgatcata 300
ttacctttat catctttggg gaaaaagtca tccccaagtc ttgaatccct gtggccaagt 360
gaaataagat agacgttcag atagcccagc ttcangtcct tgagggtctt cttcaaangc 420
tttcctcaca aaggggtctc tcaaaagaaa gtgggccaca ccttgctgac gatgaacaag 480
gtcctnccgc atnaaaaccc ttctttggga tccttttctt ggatggcttc ttcccacctc 540
atgttgaatt ctnataaaaa tagggcncag tcnaatgtng cgatattctt gcattnaatn 600
ggccaccttt accggttttt ttta 624

<210> 938
<211> 396
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 85, 221
<223> n = A,T,C or G

<400> 938
cccttagcgt ggtcgcggcc gaggtacgcg gggagggaac cgctcagata cccttccaca 60
ccgtggaaac tttgttctta ccctnttgac aaaaaatctt gctgctgctc actctttggg 120
tccacaccac ctttaagagc tacaacgatc accacgacag tctgcggctt cattcttgaa 180
gtcagcgaca ccacaaaccc accagaaggg agaaactcca nacacatctg aaggaacaaa 240
ctccagacac aacatcttta acagctgtaa cacacactgt gaaggtccac ggcttcattc 300
ttgaagccag cgagaccacg aaccctttgg aaggaaccaa ctctggacac aagcaagacc 360
gtgagacttc tacctgctca ctcaaaatca tttccg 396

<210> 939
<211> 407
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 193, 322, 325, 329, 330, 344, 384, 397
<223> n = A,T,C or G

<400> 939
cccttagcgt ggtcgcggcc gaggtcggcc gaggtacaaa agccaagatg cccattgtgg 60
gcctgggcac ttggaggtct cttctcggca aagtgaaaga agcggtgaag gtggccattg 120
atgcagaata tcgccacatt gactgtgcct atttctatga gaatcaacat gaggtgggag 180
aagccatcca agnagaagat ccaagagaag gctgtgatgc gggaggacct gttcatcgtc 240

agcaaggttg tggccccact ttctttgaga gaccccсttt gtgaggaaag cccttttgag 300
aaagaccctt caagggactt gnaanctgnn cctatctgga accnttctat ctttattcac 360
ttggccacaa gggggatttc aagnactggg ggggatngga ctttttt 407

<210> 940
<211> 407
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 193, 322, 325, 329, 330, 344, 384, 397
<223> n = A,T,C or G

<400> 940
cccttagcgt ggtcgcggcc gaggtcggcc gaggtacaaa agccaagatg cccattgtgg 60
gcctgggcac ttggaggtct cttctcggca aagtgaaaga agcggtgaag gtggccattg 120
atgcagaata tcgccacatt gactgtgcct atttctatga gaatcaacat gaggtgggag 180
aagccatcca agnagaagat ccaagagaag gctgtgatgc gggaggacct gttcatcgtc 240
agcaaggttg tggccccact ttctttgaga gacccccttt gtgaggaaag cccttttgag 300
aaagaccctt caagggactt gnaanctgnn cctatctgga accnttctat ctttattcac 360
ttggccacaa gggggatttc aagnactggg ggggatngga ctttttt 407

<210> 941
<211> 421
<212> DNA
<213> Homo sapiens

<400> 941
cccttagcgt ggtcgcggcc gaggtaccct gcgctggctc cgtgaacctt agggacaaca 60
ccgggacacc cgcgaggccg gaaaatggac tcagtggctt ttgaggatgt gtctgtgagc 120
ttcagccagg aggagtgggc tctgctggct ccttcacaga agaaactcta cagagatgtg 180
atgcaggaaa cattcaagaa cctggcatct atagggggaaa aatgggaaga cccgaatgtt 240
gaagatcaac acaaaaacca aggacgaaat ctaagaagcc atacgggaga gagactctgt 300
gaaggtaaag aaggtagtca atgtgcagaa aacttcagtc ccaatctcag tgtgacgaag 360
aagactgccg gagtaaaacc atatgagtgt acctgcccgg gcggccgctc gaaagggcga 420
a 421

<210> 942
<211> 425
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 32, 33, 35, 36, 42, 45, 46, 49, 56, 58, 64, 67, 68, 73, 81, 85, 87, 88, 92, 98, 101, 102, 106, 112, 113, 114, 128, 149, 156, 159, 164, 176, 194, 202, 209, 214, 223, 239, 273, 274, 278, 282
<223> n = A,T,C or G

<400> 942
ccctttcgag cggccgcccg ggcaggtaca nnngnncaga tnccnnttnt gggccngngc 60
actntanngt ctnttcttgg naaantnnaa gnctcccnta nngacnccat tnnnccggaa 120
tatcaccnca ttgactcggc ctatatctnt gagaancanc ttcnacatgg caaaancccct 180
ccaagacaca catncttaca cnactctcna catnccggaa ggnacctgct aatcgtcanc 240
aaggtgtggc ccactttctt tgagagaccc ctnntganga angcctttga gaaaccctcg 300
ggacctgaag ctgagctatc tggacgtcta tcttattcac tggccacagg gattcaagac 360
tggggatgac tttttcccca aagatgataa aggtaatatg atcagtggaa aaggaacctt 420

cttgg 425

<210> 943
<211> 333
<212> DNA
<213> Homo sapiens

<400> 943
ccctttcgag cggccgcccg ggcaggtact ggtgaactcc ctcacttgaa tttctcgttc 60
ttatgaaggt gctttcttgc ttggatagtt gttcagtgtg acattcctgc agggtgaaca 120
attgctagag ggttctattc agccatcttt ctccacctca catccatgtt tttgcatgtt 180
atttctttcc ttttattgat tagcatttga ttccatgaat atagcacaat gtatataacc 240
actattcttt tctggaaaac ttatgtccag gttggggtta ttatgaataa ggctatgaaa 300
tttcaggtac ctcggccgcg accacgctaa ggg 333

<210> 944
<211> 457
<212> DNA
<213> Homo sapiens

<400> 944
cccttagcgt ggtcgcggcc gaggtacaaa tctgttgcca gcctgaacac acctgtagga 60
ggtggatgga gaccctggtt gagaggtctc acccagccag tagaaacagg atcagggacc 120
tgcttgaaga agcagtctag ccccactttt gtagaacaac tgagctgtgc tgggatacca 180
tttctgcccc tcatggtgtt gggttctcca aaacctggaa gctggaacgg ctaaattgca 240
gaaacagcaa agatggcagc ctgcccctct ctctagtaac tctgtcccag gatgctttca 300
aacccttgtc aaccagagaa catcagtggg agaggctgaa gaccctggtt gggaagttct 360
cccaagtgag gaggaacaga tcagggacct gcttaaagaa gcggtcttgc cacgcttttg 420
tagagcagtt gtgtcatgct ggggtacctg cccgggc 457

<210> 945
<211> 778
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 63, 64, 210, 251, 281, 413, 429, 445, 449, 492, 535,
580, 653, 672, 675, 676, 692, 711, 721, 722, 748, 769
<223> n = A,T,C or G

<400> 945
acaaaagcca agatgcccat tgtgggcctg ggcacttgga ggtctcttct cgncaaagtt 60
ganngaagcg gttgaaggtg gccattgatg cagaatatcg gccacattga ctgtgcctat 120
ttctatgaga atcaacatga ggtgggagaa gccatccaag agaagatcca agagaaggct 180
gtgatgcggg aggacctgtt catcgtcagn aaggtgtggc ccactttctt tgagagaccc 240
cttgtggagg naaagccttt gagaagaccc tcaagggacc ntggaagctt gaagcctatc 300
tgggaccgtc tattcttaat tcacttggcc caccagggga tttcaaggac ctggggggat 360
tgaccttttt ccccaaagga tggattaaaa gggtaaatta tggatcaggt ggnaaaaagg 420
gaaccgttnc ttgggatgcc tgggnaggnc catgggaggg agcttggtgg ggaccgaagg 480
gggcttgggt gnaaagcccc ttggggggtct tcaaaatttc aaccccactt ccagnatccg 540
aagaggctct ttgaaccaaa acctggactg gaaatataan acccagtgga ctaacccagg 600
tttgagtggt cacccattcc ttaacgccag gaagaaaacc ttgatccaag ttncccttcc 660
gggcccgcct cntannaact taggtgggaa tncccccccgg gggcttgcca nggaaattcc 720
nnattatcca aagcctttat ccggattncc cggcccgaac cttccggang gggggggg 778

<210> 946
<211> 553
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 97, 286, 323, 366, 417, 420, 443, 501, 528, 529, 531, 532, 538
<223> n = A,T,C or G

<400> 946
tccaccgcgg tggcggccga ggtacagtgg gagagtgagg tgggagaaga agagtgtctg 60
gtaggtgtgc tcactgtctt cttggctgag aatgttnaat tggaagagtg ggccgctcag 120
agctcctaca aaggcagagc aaagcttctt agctgacatt gtttgagaaa ttgttggcag 180
gctctggaat gcttgtttgg ctttcttgcg gtgcctttgg tgtcttgttt ttcttcacat 240
tgcccttgaa atgatcacag ggggcactgc ttctttggca gcccanacac tgtcatgaat 300
ttttcttctc ggggctcctc aangaaccaa atcttttgca cctcacattt cttgggcccg 360
cctttnctgg ggaagccatc ctccttagaa gcctggccct cggtcccctt gtggggnctn 420
ttggccgacc ccccttggga atnttcaggg ctgcttagaa gaacccattg ggaccattca 480
agccatttaa gttgggcaag ncaaaccagg ggaagggaag ggggaaanna nnatttttnag 540
aaaacctttt tca 553

<210> 947
<211> 561
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 216, 310, 315, 321, 323, 326, 327, 329, 344, 345, 346, 358, 362, 375, 384, 390, 391, 434, 461, 462, 470, 473, 482, 484, 485, 513, 541, 555
<223> n = A,T,C or G

<400> 947
tgggccggga ggcagtgctg atccggctgc tcctccagcc cttcagacga gatcctgttt 60
cagctaaatg cagggaaact caatgttttt ttaagttttg ttttcccttt aaagcctttt 120
tttaggccac attgacagtg gtgggcgggg agaagatagg gaacactcat ccctggtcgt 180
ctatcccagt gtgtgtttta acatttcaca gcccangaac ccacagatgt gtctgggaga 240
gcctggcaag gcattcctca tcaccatcgt tgtttgcaaa aggtttaaaa caaaaacaaa 300
aaaaaccacn tctgnaaaaa nanatnngnt tatattatag aatnnnagtt tccctttngg 360
gncccggctt cttangaaac ctanggtggn nattcccccc ccgggggcct ggccaagggg 420
aaatttccga attnttccaa aggcctttta tttcggaatt nnccccggtn cgnacccctt 480
cngnnagggg gggggggggg ccccccgggg tancccccaa gccttttttt ggtttccccc 540
nttttaaagg tgggnggggg g 561

<210> 948
<211> 185
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 6, 17, 21, 29, 33, 36, 37, 39, 46, 52, 72, 89, 126, 165
<223> n = A,T,C or G

<400> 948
ncctgncagg tactgtnctc nacaaacgng ggnatnntng gagctnaatt gngttaagac 60
atcaggctcc anatatgaac tttcagcana agcgcttgcc gggagcaaag ggacagaaaa 120
gctganatga acagtgcctg gcaacaatca cagccgggca agggngctcc gagcctcgca 180
tcccc 185

<210> 949
<211> 203
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 22, 27, 28, 29, 48, 50, 97, 155, 184
<223> n = A,T,C or G

<400> 949
tcgagggggg ggccccgggt ancccannnt ttttgtatcc ctttttangn ggaggggtta 60
aatttgcgcc gcttggccgt taatcaatgg tcattanctg gttttccttg gtgtggaaaa 120
ttgtttattc ccgctcacaa attccaccac caaanattac gaagcccggg gaagcataaa 180
aagntggtaa aaagccctgg ggg 203

<210> 950
<211> 387
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 3
<223> n = A,T,C or G

<400> 950
ctncctgagg gcgaattgga gctccccgcg gtggcggccg aggtactgat tggggaagtg 60
ataaatgttc atgaaatctt cacaatttat gttcagagat tgcagtaaag acaggcgtaa 120
gaaattataa aaatattaat gtggggaatt aagaaatgtc catgaaatct tcacaattta 180
tgttcttctg ccatggcttc agccagtctc tctgttgggg gtccctgaat tcctgcaaca 240
gctcagaaac tagaggctga gaaagggagt cactcaaacc ttgaatccct gtggccagtg 300
aataagatag acgtccagat agctcagctt caggtccttg agggtcttct caaaggcttt 360
cctcacaagg ggtctctcaa agaaagt 387

<210> 951
<211> 336
<212> DNA
<213> Homo sapiens

<400> 951
ccgggcaggt acgcggggac agctgggagg acacccacat ggtcggcgtg caggatattt 60
cgctggaccc tagaaaagcc accacgacct gtgggccatg atgctacccc aatggctgct 120
gctgctgttc cttctcttct cctttctctt cctcctcacc aggggctcac tttctccaac 180
aaaatacaac cttttgtccc ctccaggcat ccaccgtctg cacagactta ccccggcccc 240
cacgtagaga ccaccctgcc tggcaggagc cagaggagct caaggagtct tgcatccgga 300
accaggactg cgagactggc tgctgccaac gtgctc 336

<210> 952
<211> 614
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 317, 321, 445, 487, 511, 533, 550, 579, 604
<223> n = A,T,C or G

<400> 952
tttgagaagc cagcgctcac ccacccgggg tctctgtgca ttgacctttg ggtgctgact 60
tggagaaaag cacaaacacg accagtccca tcctggctcc cgtggggctt cttctatcta 120
cgcattgtat cgactgcatt agttggacta agatgatgac tcagttaaag gaggagacaa 180
atgctgactg tctaagcaag aatggcccaa gctggcaaga aaaagcacac tgcatacata 240
ggatacagaa ggggcaggag cttctgcctg ccgggatctg caaccattta cattttgttt 300
tgcctgcaaa acctatnaag naagggattt cctgtttggc ccaggggagt cttccactgg 360
aacaaacaaa aatgggcagt tcaaaaaggt tcttggaggt ggtcccttat tccaagccag 420
cccaggagtc ccttcatccg tcatnccacg gggaagagtc ttttgagggg gaaacatgga 480
agtccangct catgcctctg cctatggggt ncaatttctt tcggggaatc acntgtggat 540
catggatatn tttcattaac ccccttgcgg gacccaccna tggttttcaa ggggtggctt 600
tttncccccct tttt 614

<210> 953
<211> 238
<212> DNA
<213> Homo sapiens

<400> 953
ttgtcagctg tgagcgttgc ggggctggtg gggtgtgttt gagtatgtaa gtgtctattt 60
cctgtgctct aacagtgact atttcagttc taacccttca attgctaatt ggatgggggga 120
atggcctctt agattgtcct tgttttgact tatctgctaa ggcgagagaa tgtctgggtt 180
tgccacacag tcccgcaggg acccctgctc tttgccagga tttttatatc aagtacct 238

<210> 954
<211> 351
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 45, 47, 69, 81, 88, 118, 184, 190, 195, 200, 207, 238, 246,
247, 259, 263, 266, 267, 270, 277, 280, 283, 298, 300, 322,
335, 338, 342
<223> n = A,T,C or G

<400> 954
attccgatat caagcttatc ggatactcgt acgaccctcg gaggngnggg ggcccgggat 60
accccagcnt ttttgtttcc nttttaantg gaggggttta aattgccgcc gccttggncg 120
ttaaattcat gggttcatag cctgtttcct gtgtggaaaa ttgttaatcc cggctcacaa 180
attncacacn aaacnataan gaagccncgg gggaggcaat aaaaggtggt aaaaagancc 240
tggcgnntgc ccctaaatng aanttnnaan ctaaagnttn aancattgtc aaatttgncn 300
gtttggccgc cttcaacttg gnccccgctt ttttncangt cngggggggaa a 351

<210> 955
<211> 584
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 289, 335, 342, 350, 385, 418, 459, 571
<223> n = A,T,C or G

<400> 955
atgggcgaat tggactccac cgcggtggcg gccgtcgcca tggtgaanct gagcaaagag 60
gccaagcaga gactacagca gctcttcaag gggagccagt ttgccattcg ctggggcttt 120
atccctcttg tgatttacct gggatttaag aggggtgcag atcccggaat gcctgaacca 180
actgttttga gcctactttg gggataaagg attatttggt cttctggatt tggaggcaat 240

cagcggacag catggaagat gtgtgctctg gctcggataa gagatgggnc atcattcagt 300
cacctagttg ggatggcacc aaggctcttc acagnacgca tntgttagcn agcagtgggc 360
aacttggtac ctcggcccgc tctantaacc taggtgggat cccccgggcc tgcaaggnaa 420
ttcgatatca agcctttatc cgatacccgt gcgacctcna gggggggggg cccggtaccc 480
cagctttttg ttccccttta gtgaggggtt taaattggcg ccgcttggcg taatcatggg 540
tcaataagct ggaatcctgt gtggaaattg nttattcccg ctca 584

<210> 956
<211> 828
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 381, 388, 598, 609, 728, 760, 768, 774, 777, 782, 787,
800, 802, 808, 810, 813, 815, 816
<223> n = A,T,C or G

<400> 956
aggtacaaaa gccaagatgc ccattgtggg cctgggcact tggaggnctc ttctcggcaa 60
agtgaaagaa gcggtgaagg tggccattga tgcagaatat cgccacattg actgtgccta 120
tttctatgag aatcaacatg aggtgggaga agccatccaa gagaagatcc aagagaaggc 180
tgtgatgcgg gaggacctgt tcatcgtcag caaggtgtgg cccactttct ttgagagacc 240
ccttgtgagg aaagcctttg agaagaccct caagggacct gaaagctgag cctatcctgg 300
gacgtctatc ttatttcact tggccacagg ggattcaagg actgggggat ggactttttc 360
cccaaaagat gataaaaggt naaatatnga tccagtggga aaaagggaac cgttcttggg 420
atgccctggg ggaggcccat ggggagggag ctggtgggac cgaagggggc ctggttgaaa 480
agcccctttg gggttcttca aaattttcaa cccacttttc caggaatccg aagaggggct 540
cttttgaaac aaaaaccctt gggacttgga aaattattaa aaacccaagt ggaccttnaa 600
ccccagggnt ttggaagttg gttccacccc ccattaccct ttcaccggcc aagggaagga 660
aaaaccttgg attccccagg ttaccctttg gcccccgggg gggccggggc cgccttctta 720
aaaaactnag atgggaatcc ccccccgggg ccttgccagn ggaaattncg gatnatnaaa 780
gnctttntct gaattacccn gncggaancn ttngnngggg ggggggc 828

<210> 957
<211> 390
<212> DNA
<213> Homo sapiens

<400> 957
ggcggccgag gtacaaagtg tgaggtaggc cacccagaaa caccaactcc gaagaaatgg 60
agtcagtttt ccgaagtagg gagtgaaggc ttcatttatg tgggctgaga cagtggagtt 120
tttagcagga ttacaacatt attcatacaa ggttggtgtg tatgttatag caatttgatt 180
ggctctaggt gatgtttctt tttggggagg ggatatttaa cattttctta acagagggtg 240
taataagtcc tgggttttct ttcacctggt ctaagcgaag cagggcaatg aagggggagt 300
taatctacaa caagggtcat taattcagag ggcgggaggc ttttgaccct gacatggttt 360
ccctttagtc aatgtacctg cccgggcggc 390

<210> 958
<211> 439
<212> DNA
<213> Homo sapiens

<400> 958
aggtacgcgg gagcagggaa ctgctcagat acccttccac accgtggaaa ctttgttctt 60
accctcttga cgaaaaatct tgctgctgct cactctttgg gtccacacca cctttaagag 120
ctacaacgat catcacgaca gtctgcggct tcattcttga agtcagcgac accccaaacc 180
caccagaagg gagaaactcc aggcacatct gaaggaacaa actccagaca caacatcttt 240
aacagctgta acacacactg tgaaggtcca cggcttcatt cttgaagcca gcgagaccac 300

gaaccctctg gaaggaacca actctggaca cagcaggacg tgagacttct acctgctcac 360
tcagaatcat ttccgcacca accatggcca cgtttgtgga gctcagtaca aaagccaaga 420
tgcccattgt gggcctggg 439

<210> 959
<211> 304
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 56, 57, 58, 62, 63, 64, 73, 76, 77, 122, 138, 160, 171, 176, 209, 217, 244
<223> n = A,T,C or G

<400> 959
aggtacaaaa gccaagatgc ccattgtggg cctgggcact tggaggtctc ttctcnnnaa 60
annnaaagtt tancgnncgc ccgggcaggt actggatcag tttctcctgc gtgaggtatg 120
gntgacactc aacctggnta gtcactggtt tatatttcan tccaggtttg ntcaanagcc 180
tctcgatctg gaagtggttg aaatttgana ccccaanggc tttcaccagc ccctcgtcca 240
ccanctcctc catggcctcc caggcatcca agaacgttcc ttttccactt gatcatatta 300
cctt 304

<210> 960
<211> 789
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 21, 23, 108, 219, 242, 395, 476, 510, 522, 547, 556, 574, 648, 659, 674, 677, 687, 689, 698, 705, 738, 741, 756, 759, 779
<223> n = A,T,C or G

<400> 960
ggcccgnccg ggcaggtaca nangccaaga tgcccattgt gggcctgggc acttggaggt 60
ctcttctcgg caaagtgaaa gaagcggtga aggtggccat tgatgcanaa tatcgccaca 120
ttgactgtgc ctatttctat gagaatcaac atgaggtggg agaagccatc caagagaaga 180
tccaagagaa ggctgtgatg cgggaggacc tgttcatcnt cagcaaggtg tggcccactt 240
tntttgagag accccttgtg aggaaagcct ttgaagaaga ccctcaagga cctgaaagct 300
gaagctatct gggacgtctt attctttatt cactggccca cagggattca aagactgggg 360
ggatgacttt ttccccaaaa gatgataaaa gggtnattat tggattcagt gggaaaaaag 420
ggaaccgttt cttgggattg ccctggggag gcccatggaa ggagcctggt gggacnaagg 480
ggcttggttg gaaaagcccc tttggggggtn ctcaaaattt tnaacccact ttccagaatc 540
cgaaganggc ttcttngaaa caaaaccttg gganctggaa aatataaaac ccagtggact 600
taacccaggg ttggagttgt taccccatta ccctttacgc cagggaanaa aactggatnc 660
caagttaccc ttcnggnccg cttcttnana actttgtngg gattnccccc cggggcctgg 720
gaggggaaat ttcgattntt naaaggcctt attcgntanc cccgtcggac ccctcctang 780
ggggggggg 789

<210> 961
<211> 583
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 3, 199, 423, 451, 470, 512, 523, 529, 537, 555, 562

<223> n = A,T,C or G

<400> 961
nanctccacc gcggtggctg acggatgagg actctgggct gctggaatag gacactcaag 60
acttttggct gccattttgt ttgttcagtg gagactccct ggccaacaga atccttcttg 120
atagtttgca ggcaaaacaa atgtaatgtt gcagatccgc aggcagaagc tctgcccttc 180
tgtatcctat gtatgcagng tgctttttct tgccagcttg ggccattctt gcttagacag 240
tcagcatttg tctcctcctt taactgagtc atcatcttaa gtccaactaa tgcagtcgat 300
acaaatgccg tagataggaa ggaagcccca cgggggagcc agggatggga cttggtccgt 360
gtttgtgctt ttctccaagt cagcacccaa aggtcaatgc acagaagacc cccgggtggg 420
gtngaagccg ctggcttctt caaaaccggc ncgctcttag gaactaagtn gggatccccc 480
gggggcttgg cagggaattc gataatcaaa gncttatccg atncccgtnc gaccctngga 540
gggggggcc cgggnacccc anctttttgg gtccctttaa gtg 583

<210> 962
<211> 560
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 210, 307, 328, 363, 375, 390, 402, 439, 443, 524, 530, 540,
544
<223> n = A,T,C or G

<400> 962
ccgggcaggt acgcggggag cagggaactc gctcagatac ccttccacac cgtggaaact 60
ttgttcttac cctcttgacg aaaaatcttg ctgctgctca ctctttgggt ccacaccacc 120
tttaagagct acaacgatca ccacgacagt ctgcggcttc attcttgaag tcagcgacac 180
cacaaaccca ccagaaggga gaaactccan acacatctga aggaacaaac tccagacaca 240
acatctttaa cagctgtaac acacacttgt gaagggttcc accggctttc atttcttgga 300
agccagncgg agacccaccg aacccttntg ggaaagggaa ccaacttctt gggacacagg 360
cangggacgt tgaanacttt ctacctgctn acttcagaaa tnaattttcc ggcacccaac 420
cccattgggc cacgttttng tgnggagctt cagtaccaaa aagccaagga ttgccccatt 480
tgttgggccc tgggccactt tgggagggtc tccttctttc gggnaaaaan atggaaaaan 540
aaanccgggt ggaaaaggtg 560

<210> 963
<211> 342
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 215
<223> n = A,T,C or G

<400> 963
aggtactttc tacacagaac caagtaaaga gaaggaggcc ggaactacac cagcaaaaga 60
ctggaccctt gtcgaaactc ctcctgggga ggaacaagcc aagcagaatg ccaactccca 120
gctgtccatc ttgttcattg aaaaacctca aggaggaaca gtgaaagttg gtgaagatat 180
caccttcata gccaaagtca aggctgaaga tcttntgaga aaacccacta tcaaatggtt 240
caaaggaaaa tggatggacc tggccagcaa agccgggaag caccttcagc tgaaaggaaa 300
cctttgagaa ggcacagtcg ggtgttacct tgcccgggcg gc 342

<210> 964
<211> 87
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 77
<223> n = A,T,C or G

<400> 964
gctgcaggaa tttcggatat tcaaagcttt atcgattacc cggtccgacc tcgaaggggg 60
gggccccggt accccanctt ttgttcc 87

<210> 965
<211> 423
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 50, 53, 59, 62, 63, 68, 69, 70, 75, 79, 80, 83, 91, 94,
97, 99, 104, 125, 132, 143, 149, 156, 164, 167, 173, 176,
180, 181
<223> n = A,T,C or G

<400> 965
aattggagct ccccgcggtg gcggccgatg tacaantacc ggaatgcccn ttntgggcna 60
gnncactnnn aggcntatnn ttnccgaaga nctngangng gggnccgtgg cccttgatgc 120
agaancttta cncattggct gtncctctnc ttgtcntaat catngtnatg tgnganaacn 180
natccaagag aagatccaag agaaggctgt gatgcgggag gacctgttca tcgtcagcaa 240
ggtgtggccc actttctttg agagacccct tgtgaggaaa gcctttgaga agaccctcaa 300
ggacctgaag ctgagctatc tggacgtcta tcttattcac tggcccaggg attcaagact 360
ggggatgact ttttccccaa agatgataaa ggtaatatga tcagtggaaa aggaacgttc 420
ttg 423

<210> 966
<211> 261
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 36, 61, 66, 81, 82, 84, 90, 92, 100, 109, 118, 135, 143,
147, 157, 165, 169
<223> n = A,T,C or G

<400> 966
agggcgaatt ggagctcccc gcggtggcgg cccgangtac tgatctccac aaacgtggcc 60
ntggtnggtg cggaaatgat nntnagtgan cnggtaaaan tctcacgtnc tgctgtgncc 120
agagttggtt ccttncagag ggntcgnggt ctccctngct tcaanaatna agccttggac 180
cttcacagtg tgtgttacag ctgttaaaga tgttgtgtct ggagtttgtt ccttcagatg 240
tgtctggagt ttctcccttc t 261

<210> 967
<211> 187
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 9, 11, 12, 27, 29, 31, 36, 37, 38, 43, 46, 54, 58, 60,
61, 69, 70, 75, 78, 79, 80, 81, 83, 87, 89, 90, 104, 112,

120, 129, 133, 135, 138, 146, 149
<223> n = A,T,C or G

<400> 967
catnacatnc nnctattgga tcttctntng natggnnntt ccnacntaat gttnattntn 60
ntagaaatnn gcacnggnnn ngnggcnann ttctgcatca atgnccacct angccgattn 120
tttcacttng ccnanaanag accttnaant gcccatgccc acaatgggca tcttggcttt 180
tgtacct 187

<210> 968
<211> 122
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19
<223> n = A,T,C or G

<400> 968
aagctccaca aacgtggtna tggttggtgc ggaaatgatt ctgagtgagc aggtagaagt 60
ctcacgtcct gctgtgtcca gagttggttc cttccagagg gttcgtggtc tcgctggctt 120
ca 122

<210> 969
<211> 122
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19
<223> n = A,T,C or G

<400> 969
aagctccaca aacgtggtna tggttggtgc ggaaatgatt ctgagtgagc aggtagaagt 60
ctcacgtcct gctgtgtcca gagttggttc cttccagagg gttcgtggtc tcgctggctt 120
ca 122

<210> 970
<211> 180
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 19, 31, 50, 51, 70, 77, 80, 82, 83
<223> n = A,T,C or G

<400> 970
ctccccgcgg nggcggccnt ccgggcaggt nttaaagcca ttttgcccan ngtgggcctg 60
ggcactgggn ggtttcnaan cnncaaagtg aaagaagcgg tgaaggtggc cattgatgca 120
gaatatcgcc acattgactg tgcctatttc tatgagaatc aacatgaggt gggagaaagc 180

<210> 971
<211> 718
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 264, 343, 432, 472, 480, 485, 491, 492, 497, 501, 510, 512, 516, 543, 553, 560, 574, 578, 583, 599, 605, 609, 614, 616, 617, 624, 627, 631, 638, 639, 641, 649, 651, 652, 657, 663, 665, 679, 683, 684, 692, 702, 706
<223> n = A,T,C or G

<400> 971
agctccaccg cggtggtcga gcggccgccc gggcaggtac gcggggctct ctcgccaggc 60
gtcctcgtgg aagtgacatc gtctttaaac cctgcgtggc aatccctgac gcaccgccgt 120
gatgcccagg gaagacaggg cgacctggaa gtccaactac ttccttaaga tcatccaact 180
attggatgat tatccgaaat gtttcattgt gggagcagac aatgtgggct ccaagcagat 240
gcagcagatc cgcatgtccc ttcncgggaa ggctgtggtg ttgatgggca aagaacacca 300
tgatgcgcaa ggccatcccg agggcacctg gaaaacaacc canctctgga gaaactgctg 360
cctcatatcc gggggaatgt gggctttgtg ttcaccaagg aggacctcac tgagatcagg 420
gacatgttgc tngccaataa ggtgccactg ctgcccgtgc tggtgccatt gncccatgtn 480
aagtnactgt nncagcncaa naaacacttn tntttnggcc ctagaaagaa cttctttttt 540
tcnaggcttt tangttattn accacttaaa attntttnaa ggnggcacca ttttgaaant 600
ccttnagtng attntnncac cttnatnaaa naacttgnna naacaaaant nnggganccc 660
aantnaaacc cacccсttnt ttnnaaacat tnctttaaaa antttncccc ctttttc 718

<210> 972
<211> 204
<212> DNA
<213> Homo sapiens

<400> 972
acacagcctt caacccattt cctggcatac aactcctaac atcccgagaa tatccaaagt 60
gatgcccttt tctaatgttg actgatggat ggaagcccat agttagcttc agaattaggg 120
ctgctcacca gaaagaccaa ggcatgatta cagaattaga actttcagtc ccatcccctg 180
acttccgggg aggggagagg agct 204

<210> 973
<211> 299
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 24, 25, 27, 29, 35, 43, 48, 71, 78, 79, 83, 87, 96, 100, 102, 108, 110, 111, 113, 125, 126, 153, 163, 184, 203, 206, 213, 239, 242, 263, 266
<223> n = A,T,C or G

<400> 973
actttttttt tttttttttn tttnngnant atttnttttt ttnttatntt ttttttcaaa 60
ggtttttatt ntatctannt ttncttngat tgttanacan tnggcatncn nanaacaact 120
acaannacca ctcctccgtg ctggactcca acngctcctt ctngctctac agcaagctca 180
ccgnggacaa gagcaggtgg cancanggga acntcttctc atgctccatg atgcatgang 240
gnctgcacaa ccactacacg canaanaacc tatccctgtc tccgggtaaa tgagtgcga 299

<210> 974
<211> 257
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 2, 3
<223> n = A,T,C or G

<400> 974
cnnattggag ctccccgcgg tggcggccga ggtacgcggg atcattgatc aagttcagag 60
gctctgattt gaaacgtgca tgcttgaata cgccatggag gagctggtgg acgaggggct 120
ggtgaaagcc cttggggtct caaatttcaa ccacttccag atcgagaggc tcttgaacaa 180
acctggactg aaatataaac cagtgactaa ccaggttgag tgtcacccat acctcacgca 240
ggagaaactg atccagt 257

<210> 975
<211> 467
<212> DNA
<213> Homo sapiens

<400> 975
ctgattggag ctccccgcgg tggcgttgat tctcatagaa ataggcacag tcaatgtggc 60
gatattctgc atcaatggcc accttcaccg cttctttcac tttgccgaga agagacctcc 120
aagtgcccag gcccacaatg ggcatcttgg cttttgtact gagctccaca aacgtggcca 180
tggttggtgc ggaaatgatt ctgagtgagc gggtagaagt ctcacgtcct gctgtgtcca 240
gagttgttcc ttccagaggg ttcgtggtct cgctggcttc aagaatgaag ccgtggacct 300
tcacagtgtg tgttacagct gttaaagatg ttgtgtctgg agtttgttcc ttcagatgtg 360
tctggagttt ctcccttctg gtgggtttgt ggtgtcgctg acttcaagaa tgaagcccgc 420
agactgtcgt ggtgatcgtt gtagctctta aaggtggtgt ggaccca 467

<210> 976
<211> 389
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 36, 38, 41, 51, 77, 79, 80, 82, 95, 106, 142, 148, 149,
151, 178, 190, 191, 200, 201, 206, 207, 233, 236, 248, 260,
266, 269, 270, 271, 283, 292, 300, 302, 303, 305, 310, 311,
312, 316, 317, 318, 344, 346, 358, 359, 361, 380
<223> n = A,T,C or G

<400> 976
tagggcnaat tggagctccc cgcggtggcg gccgangnac naggtacact natatggttt 60
tactccggca gtcttcnann anacactgat attgngactg aagggntctg cacattttct 120
accttcttta ccttccagag tntctctnnc ntatggcttc ttacatttcg tccttggntt 180
ttgagttgan nttcaacatn nggggnntcc catttttccc ctatagatgc cangancttg 240
aatgtttnct gcatcacatn tctccncann ntcttctgta aangatccaa cncagcccan 300
tnntnctggn nnaaannnac agacacattc taaaaagcca ctgncnccat tttccggnnt 360
ntcgggtgtc ccggtgttgn ccctaaggt 389

<210> 977
<211> 357
<212> DNA
<213> Homo sapiens

<400> 977
aggtaccgct ttggtgacct cagcgtgacc tacgagccca tggcctacat ggatgctgcc 60
tactttggtg agatcagcat cgggactcca ccccagaact tcctggtcct tttgacacc 120
ggctcctcca acttgtgggt gccctctgtc tactgccaga gccaggcctg caccagtcac 180
tcccgcttca accccagcga gtcgtccacc tactccacca atgggtagac cttctccctg 240
cagtatggca gtggcagcct caccggcttc tttggctatg acaccctgac tgtccagagc 300

atccaggtcc ccaaccagga gttcggcttg agtgagaatg agcctggtac ctgcccg 357

<210> 978
<211> 292
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 190, 194, 198, 220, 234, 255, 264, 276
<223> n = A,T,C or G

<400> 978
gcgtaatcat ggtcataagc tgtttcctgg tgtggaaatt gttattccgc ttcacaattt 60
tcacacaaca tacgaagccc gggagcatta aaagtgtaaa gcctgggggg tgccttaatg 120
agtggagcca acctcacatt aaattgcggt tgcgcttcaa ttggcccggt ttttcaagtc 180
ggggaaaaan ctgntcgngg cccaacctgc atttaattgn aattcggccc aacncccccg 240
ggggaagaag gcggntttcg ggtntttggg gggggntttt tttgggtttt tt 292

<210> 979
<211> 337
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 259, 312
<223> n = A,T,C or G

<400> 979
ccgggcaggt acaaatctgt tgccagcctg aacacacctg taggaggtgg atggagaccc 60
tggttgagag gtctcaccca gccagtagaa acaggatcag ggacctgctt gaagaagcag 120
tctagcccca cttttgtaga acagctgagc tgtgctggga taccatttct gcccctcatg 180
gtgttgggtt ctccaaaacc tggaagctgg aacggctaaa ttgcagaaac agcaaagatg 240
gcaagcctgc cctctctnt agtaactctg tcccaggatg ctttcaaacc cttgtcaacc 300
agagaacatc antgggagag ggcttgaaaa ccccttg 337

<210> 980
<211> 109
<212> DNA
<213> Homo sapiens

<400> 980
cactacttag ggcgaattgg agctccccgc ggtggcggcc gaggtacaaa agccaagatg 60
cccattgtgg gcctgggcac ttggaggtct cttctcggca aagtgaaag 109

<210> 981
<211> 468
<212> DNA
<213> Homo sapiens

<400> 981
gattggagct ccccgcggtg gcgttgattc tcatagaaat aggcacagtc aatgtggcga 60
tattctgcat caatggccac cttcaccgct tctttcactt tgccgagaag agacctccaa 120
gtgcccaggc ccacaatggg catcttggct tttgtactga gctccacaaa cgtggccatg 180
gttggtgcgg aaatgattct gagtgagcgg gtagaagtct cacgtcctgc tgtgtccaga 240
gttggttcct tccagagggt tcgtggtctc gctggcttca agaatgaagc cgtggacctt 300
cacagtgtgt gttacagctg ttaaagatgt tgtgtctgga gtttgttcct tcagatgtgt 360
ctggagtttc tcccttctgg tgggtttgtg gtgtcgctga cttcaagaat gaagccgcag 420

actgtcgtgg tgatcgttgt agctcttaaa ggtggtgtgg acccaaag 468

<210> 982
<211> 357
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 30, 31, 41, 46, 48, 64, 68, 79, 80, 86, 90, 99, 105, 113, 114, 119, 126, 129, 136, 138, 143, 149, 154, 156, 163, 166, 170, 175, 181, 182, 221, 236, 237, 247, 248, 250, 255, 262, 267, 273, 274, 279, 280, 283, 284, 285, 299, 305
<223> n = A,T,C or G

<221> misc_feature
<222> 308, 312, 325, 335
<223> n = A,T,C or G

<400> 982
cccttagcgt ggtcncggcc gacgtacacn nggagagtga ngtggnanaa gaagagtgtc 60
tggnaagngt gctcactgnn ttcttngctn ataatgttna attgnaagag agnncgctna 120
gagctnctnc aaaggnanaa canagcttnt taantnacat tgntanacan attgntggca 180
nnctctggaa tgcttgcatg gctttaatgt ggtgccttgc ngtgtcctgt tttctnncac 240
attgccnntn aaatnatcaa angggcnctg atnntttgnn atnnnaaaca ctgaaattna 300
ttttnttntc gngagctctc acganccaat ctttncactc acattcttgg ccgcctt 357

<210> 983
<211> 469
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 381, 448
<223> n = A,T,C or G

<400> 983
cccttagcgg cccgcccggg caggtacttt tttttttttt tttttttttt ttaccatctc 60
agcaaataca tggttcttaa aaacatacat gtccatttct atgtctccca caaaacatct 120
gagtaattac ctccagacaa tgtgtgctaa acttcgagtt ttgaatattg ctttaaatta 180
ttgctaccac ttgtatatga ctttattgtt taccaagcac ttgtatatat tacctagtat 240
gtacaacaac acggtaaagt atgtatttat caagaaaaaa taaccaagat tcagaaaaac 300
tacgagaatt aaataaggtc actcaccttg taaacgatat agccaggttt tacaacgagg 360
tgcgctcaat cacaaagtat ntgcttttcc ccaatatctt ctttaactat aaacatttat 420
ttaatgccca ctaattgcca agaattgngc tagaaacttt caaatttg 469

<210> 984
<211> 529
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 98, 272, 459, 484
<223> n = A,T,C or G

<400> 984
cccttagcgg ccgcccgggc aggnactttt tttttttttt tttttttttt taccatctca 60

gcaaatacat ggttcttaaa aacatacatg tccatttnta tgtctcccac aaaacatctg 120
agtaattacc tccagacaat gtgtgctaaa cttcgagttt tgaatattgc tttaaattat 180
tgctaccact tgtatatgac tttattgttt accaagcact tgtatatatt acctagtatg 240
tacaacaaca cggtaaagta tgtatttatc anaaaaaata accaagattc agaaaaacta 300
cgagaattaa ataaggtcac tcaccttgta aacgatatag ccaggtttta caacgaggtg 360
cgctcaatca caaagtatat gcttttcccc aatatcttct ttaactataa acatttattt 420
aatgcccact aattgccaag aattgtgcta gaaactttna aattttgtct tactctggta 480
attntcatga gggattaccg tatgtatcat gcttgatagt ttattttca 529

<210> 985
<211> 206
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 12, 13, 15, 22, 37, 48, 62, 63, 88, 89, 99, 105, 108,
118, 126, 132, 141, 144, 146, 149, 150, 151, 152, 158, 165,
168, 169, 180, 182, 183, 184, 188, 190, 191, 192
<223> n = A,T,C or G

<400> 985
cccttggcng cnngngcccg gnctggtact gattggngaa gtgataantg tacatgaaat 60
cnntacaatg catgtgcaaa gatggcanng acacatgcnt ctcanatnat aaaaatanta 120
ctgtgnggaa tnaagaaatg ntcntnaann nntaacangg aatgntcnng tgccatggcn 180
tnnnccantn nntctggtgg ggggcc 206

<210> 986
<211> 300
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 36, 89, 92, 98, 102, 126, 138, 144, 195, 199, 211, 219,
284, 290
<223> n = A,T,C or G

<400> 986
aaatgagact gcctcaaaaa aaaaanaatg aaactntatt ttaggctgtt ctggaggatt 60
cattagtgct cccattcgaa tgtatttang anacccgnac anggttgcaa aagatgggct 120
ttgtangcca tttgcatntt ggtnaaatgg gaccctttcc aacaggatca aaacctttta 180
tattggccac agaanattnt tgtctcattt nacaaacgng gggactacaa ctaactatat 240
agtgtaattc tttaaagatt tgaaaaaaat tgtcaaagta atanatattn cattcttttt 300

<210> 987
<211> 542
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 269, 444
<223> n = A,T,C or G

<400> 987
cccttagcgt ggtcgcggcc gaggtaccag agggcaagaa gcaggggaag agcccctgga 60
agcacacaga ggtgttctgc tccatcccat cccgctccct gctctcccca agctactacc 120

acagctttgg agtcaccgag aactatgtca tcttccttga gcagcctttc aggttggata 180
ttctcaagat ggcaaccgca tacatccgga gaatgagctg ggcctcctgc ctggctttcc 240
acagggagga gaagacttat atccacatna tcgaccaaag gaccaggcag cctgtgcaga 300
ccaagtttta cacagacgcc atggtggtct tccatcacgt caacgcctac gaagaggacg 360
gctgcatcgt gtttgacgtc attgcctacg aggacaacaa gcctctacca gctcttctac 420
ctggccaacc tgaaccagga cttnaaggag aaactccagg ctcacctcgg tccccaccct 480
taaggaggtt tgccgtgccc ctccacgtgg acaagaaatg cagaagtggg cacaaaattt 540
aa 542

<210> 988
<211> 461
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 22, 52, 56, 92, 189, 221, 222, 235, 301, 304, 323, 364, 365, 370, 377, 392, 416, 436, 440, 446
<223> n = A,T,C or G

<400> 988
cccttncgag cggccgcccg gncaggtact gccactccaa gggcatcacc gntacngcct 60
acagcccccct gggctctccg gatagacctt gngcctaacc tgaggaccct tccctactgg 120
aggatcccaa gattaaggag attgctgcaa agcacaaaaa aaccacagcc caggttctga 180
tccgtttcna tatccagagg aatgtgacag ggatccccaa nntctatgac accancacac 240
attgttggag aacattcagg tctttggact ttaaattgaa gtggatgagg agaatggcaa 300
ncantacttc agccttcaac canaaacctg ggaggggccc tttttgaact ttcaaaggga 360
aatnnttctn cattttngga agggaccttt tncccctttt gaatggcaag aaaatnattt 420
ggagggtttg aaattnttcn ctgggntgag gaatttacca c 461

<210> 989
<211> 375
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 42, 57, 289, 332
<223> n = A,T,C or G

<400> 989
ccctttcgac ggccgcccgg gcaggtacag ttgaagctgc anagttttac cagtggncaa 60
tttcttgtgt ttcatttaaa gaacagtttc acaaaggggc tttattgtgc cattgtgggg 120
gccacgtgcc aatcaatagc atgggacaaa gtaagtaaag gcatgaagaa acaaacaagc 180
aaattcacga aaacagaagt gcttaaatta accaagtgac agtttgtgca tcagtctcac 240
aatgggctgt cacatgaaat gaggggcaga agagggtgaa gtacctcgnc ccgcgaccca 300
cctaaggggc cgaatttcca ggcacacttg gncggcccgt tactagtgga tcccgagctc 360
ggggccaagc ttggg 375

<210> 990
<211> 75
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 4, 6, 8, 17, 19, 21, 43
<223> n = A,T,C or G

<400> 990
angngngntc gagcggncnt nagatgtgat gcgatatctg cancaattcg cccttagcgt 60
ggtcgcggcc gaggt 75

<210> 991
<211> 185
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 46, 69, 81, 97
<223> n = A,T,C or G

<400> 991
ctcacactgg acacctttta aaataacaac aaggaaaacc cagctnagtc caaactccat 60
ggtgagttnt ctgtgtgcag ncctgatcag cacgcanaaa cagctgggaa tcccagggct 120
ggggctcctc cccgcgtacc tgcccgggcg gccgctcgaa agggcgaatt ccagcacact 180
ggcgg 185

<210> 992
<211> 402
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 60, 61, 67, 70, 78, 85, 86, 90, 91, 92, 98, 99, 100,
109, 110, 123, 126, 128, 129, 133, 150, 151, 152, 155, 169,
177, 182, 185, 198, 199, 200, 201, 202, 206, 210, 216, 217,
218, 219, 222, 223, 224, 225, 233, 234, 236, 237, 239
<223> n = A,T,C or G

<221> misc_feature
<222> 244, 247, 248, 249, 255, 256, 258, 267, 268, 269, 270, 271,
276, 278, 282, 291, 292, 294, 299, 303, 305, 308, 309, 310,
321, 331, 332, 334, 336, 340, 349, 353, 363, 364, 365, 384,
391, 396
<223> n = A,T,C or G

<400> 992
ccctttcgag cggccgcccg ggcaggtact ttattttttt tttttttttt tcgngaaaan 60
nggggggnaan ctttttttnta aaaanntttn nnaaaaannn tttttaaann ggggaaattt 120
ttncananng ggnaaaaaaa gggtttttttn nnggnaattt tttcccccnt tcccaanaaa 180
anaanccctt ttttaaannn nncccntttn aaaacnnnnt tnnnncccca aannanngna 240
aaanttnnna aaaanncntt tttttnnnn nccccnanag anaaaaaaaa nngnttttnt 300
atngnggnnn aaatacccca ngattttttt nncncnggtn ttttaaacnc ttnaaaaaaa 360
aannnccccc caataaaatt ggtnttgggt nggganaaaa aa 402

<210> 993
<211> 358
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 60, 62, 64, 68, 70, 76, 85, 87, 88, 90, 94, 95, 96, 98,
103, 108, 109, 111, 114, 115, 121, 125, 128, 143, 145, 146,
147, 148, 151, 153, 154, 155, 156, 159, 161, 166, 167, 170,

177, 179, 181, 188, 190, 194, 202, 205, 223, 224, 225
<223> n = A,T,C or G

<221> misc_feature
<222> 231, 233, 245, 246, 247, 255, 257, 259, 264, 265, 271, 274,
281, 290, 291, 292, 296, 302, 306, 307, 308, 309, 311, 312,
314, 315, 324, 325, 326, 328, 329, 341, 342, 343, 347, 349
<223> n = A,T,C or G

<400> 993
ccctttcgag cggccgcccg ggcaggtact ttnttttttt tttttttttt ttaaaaaaan 60
ancntttncn tttttncccc gggcngnntn aaannncngg gcntaaanna nttnnccccc 120
ntaanccncc aaaaggggg gantnnnngg ngnnnnccnc nttccnnggn caaaaancng 180
nttttaangn cccncccaaa anggntttcc agggggaaat ttnnntaccc ngntaatttt 240
aaaannnaaa tttcngngna aaanngaccc naantttgtg nggttttccn nncccntttt 300
tnaaannnnt nntnntgtat aaannncnna aaaaaataat nnntttnana aaaaaaaa 358

<210> 994
<211> 307
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 9, 19, 23, 28, 33, 34, 41, 42, 43, 44, 45, 48, 50, 58,
59, 63, 64, 67, 68, 76, 77, 79, 80, 81, 82, 83, 84, 86,
92, 93, 96, 106, 107, 108, 112, 113, 117, 122, 127, 128,
129, 136, 137, 142, 157, 159, 166, 171, 174, 184, 191, 193
<223> n = A,T,C or G

<221> misc_feature
<222> 196
<223> n = A,T,C or G

<400> 994
actntattnt tttttttna atnaagtntg gannaaaaaa nnnnnggntn gtgacaanng 60
gannttnnac cccccnnann nnnncnaggc tnnggncctg gaagcnnntg anntttnaca 120
cngaaannnc ccccannaaa cnggggacca ccccctncnc catggngtgt nttncccaaa 180
acanctttaa ntnggnaggg aaaataagaa aaggggaggt ttggggaaaa agtcatcccc 240
agtcttgaat ccctgtggcc agtgaataag atatacgtcc agatagctca acttcaggtc 300
cttgagg 307

<210> 995
<211> 456
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 9, 10, 11, 16, 17, 18, 30, 36, 41, 45, 49, 54, 55, 57,
58, 65, 67, 68, 69, 77, 87, 89, 96, 99, 101, 102, 110, 113,
119, 123, 124, 130, 131, 139, 147, 148, 152, 154, 157, 162,
165, 167, 183, 186, 188, 192, 204, 213, 214, 228, 230
<223> n = A,T,C or G

<221> misc_feature
<222> 232, 234, 250, 251, 253, 254, 258, 261, 267, 289, 295, 308,
314, 315, 335, 343, 347, 358, 364, 366, 368, 372, 385, 444
<223> n = A,T,C or G

<400> 995
ccccttancnn nggccnnncc gacgtgcacn ggagcnggga nccgntcana tacnntnnca 60
caccncnnna actttgngct taccctntng acaaanaanc nngctgctgn tgnctcttng 120
ggnncacacn ncctttaana gctacannga tnancangac anggngnggc ttcattcttg 180
aantcngnga cnccacaaac ccancccaag ggnnaaactc cgcacccntn tnanagaaca 240
aactccaaan ncnncatntt ntacagntgt aacacacact gtgaaagtnc acggnttcat 300
tcttgaancc agcnngacca caaacccttt ggaangaacc agntctngac acagcaanga 360
cgtnanantt cnacctgctc actcngaatg attttcgtac caaccatggc cacctttgtg 420
gagctcagta cctgcccggg cggncgcttt aaaggg 456

<210> 996
<211> 190
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 11, 12, 14, 15, 17, 22, 24, 30, 34, 39, 40, 45, 61, 67,
87, 88, 90, 99, 108, 109, 115, 122, 124, 130, 134, 135,
140, 142, 148, 158, 166, 171, 176, 177
<223> n = A,T,C or G

<400> 996
cgtnccctga nntnnanaaa cntngccatn gttngtgcnn aaatnatttt tatttatcat 60
ntagaancca cacaaaaatt ttttttnngn gtttttttnt tccagaanna aaggntctca 120
cntncttggn gaannaaaan anccaccntc acagtgtntg ttacantttg ntaacnnatg 180
gggggggggg 190

<210> 997
<211> 406
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 34, 40, 42, 44, 50, 57, 76, 77, 79, 80, 83, 84, 85, 93,
94, 95, 97, 101, 105, 109, 110, 111, 115, 118, 119, 122,
125, 126, 127, 137, 145, 156, 159, 164, 167, 168, 173, 185,
191, 193, 196, 204, 207, 212, 220, 255, 259, 289, 295
<223> n = A,T,C or G

<221> misc_feature
<222> 299, 303, 305, 306, 319, 322, 325, 333, 337, 343, 356
<223> n = A,T,C or G

<400> 997
ccctttcgag cggccgcccg ggcaggtacc cgnncttggn gntnagggtn gagaacntat 60
gaacattgtg tggggnngnn tgnnntatgg acnnngntac nttcntgcnn ncaangcnnc 120
antannntgt ctcatancca cactnctact tggganccnt tacnganccc tgnaaagcgg 180
attgntttcc ngnccnggcg ggantgnaaa cnaccactgn ctccaaacaa agcatcaaca 240
gctacctggg gatgnggana actctggttg gcgaatttca cgaactggng gaggntcant 300
ggncnntcac gaacaacana cntgntactg gtnggcnttg ttnttggtcc attctnctgg 360
gaccaccacc ctggaaggac acttgagccc tactcaagga cccacc 406

<210> 998
<211> 310
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 51, 56, 57, 58, 59, 60, 61, 64, 65, 68, 69, 70, 71, 72, 77, 81, 83, 84, 85, 86, 87, 90, 91, 93, 98, 99, 105, 115, 116, 118, 120, 124, 125, 127, 128, 129, 156, 166, 167, 168, 169, 175, 186, 190, 206, 214, 220, 221, 222, 225, 236, 238
<223> n = A,T,C or G

<221> misc_feature
<222> 247, 252, 254, 256, 260, 263, 274, 275, 276, 277, 278, 280, 285, 286, 287, 288, 292, 298, 310
<223> n = A,T,C or G

<400> 998
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cccttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt nggggnnnnn 60
nttnnccnnn nnggggnaaa ntnnnnnaan nanaaccnna acccnaaggg gaaannangn 120
aaanntnnnc ccctttttttt tttttttgg gggggnttcc cccccnnnnt ttttngggga 180
aaaaancccn cccaaaaaaa aatttnaaaa attnccttttn nnccnaaatt tttttntncc 240
ctttttnccc cnanantttn aangggggggg tttnnnnnan ggggnnnnaa anttttttnaa 300
aaaaaaaaan                                                         310
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<210> 999
<211> 128
<212> DNA
<213> Homo sapiens

<400> 999
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aaatgattct gagtgagcag gtagaagtct cacgtcctgc tgtgtccaga gttggttcct 120
tccagagg                                                           128
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<210> 1000
<211> 818
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 339, 340, 349, 351, 371, 374, 383, 385, 394, 423, 427, 430, 451, 452, 455, 463, 464, 483, 486, 493, 498, 499, 508, 514, 516, 519, 522, 529, 541, 542, 547, 548, 551, 552, 557, 563, 566, 569, 571, 573, 575, 582, 595, 598, 600, 606, 608
<223> n = A,T,C or G

<221> misc_feature
<222> 610, 611, 616, 622, 624, 637, 641, 658, 666, 667, 672, 674, 678, 679, 685, 686, 687, 688, 689, 692, 695, 710, 714, 720, 722, 723, 731, 734, 736, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 752, 753, 754, 755, 756
<223> n = A,T,C or G

<221> misc_feature
<222> 758, 759, 763, 764, 770, 772, 777, 782, 783, 787, 790, 793, 794, 799, 804, 805, 807
<223> n = A,T,C or G

<400> 1000
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actcccaggg agaccaaaag ccttcttaca tctcaaggta gggacaaaaa tggggaccat 120
gatggctgat tattcaaaat aaaacaaaaa gtattaaggt gaagattttt taaaatgctg 180
cattacataa tttacatgaa agcaatcctg taacctcccc tttgtggact caggagagaa 240
ctgggccgtt ctcctgagag aagtggggtg gcttttggga gggcaaggga cttcctgtaa 300
caatgcatct cacaatatgt ggaatgacta ttttaaagnn taaccttgna nagtacctgc 360
ccgggcggcc nctngaaagg gcnanttcca gcanactggc ggccgttact tagtgggatc 420
cgngctnggn accaaccttg gcgtaaataa nnggnaatag ctnntttcct gggggggaaat 480
ttnttntccc ccncaaannt ttcccccnca aaananccna ancccggaant ttttaaaagg 540
nnaaaanncc nngggggnccc ctnaanggng ngncnctaac cnccaaatta aattnggntn 600
ggcccncncn ngcccntttt tnanggggga aaaaccncgg ngggccccct tttaatanaa 660
aaaaanncte cncncccnng ggggnnnnng gnggnaagtt ttttgtgggn tttncccccn 720
anntttttt nttntntnnn nnnnnnnnnn gnnnnntnng ggnngggggn anagggnttt 780
tnntttnttn tannggggnt tttnnanaaa aaaaaaaa 818

<210> 1001
<211> 411
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 46, 71, 74, 89, 125, 135, 151, 154, 171, 181, 203, 206,
216, 222, 239, 244, 254, 262, 265, 279, 281, 288, 291, 305,
313, 329, 338, 341, 357, 365, 373, 379
<223> n = A,T,C or G

<400> 1001
aggtacgcgg gggggatctc aggaggcagc tntctcggaa tatctncacc atggcctggg 60
ctctgctcct nctnaccctc ctcactcang gcacaggatc ctgggctcag tctgccctga 120
cttangcttc ctccntgtgc ctggatctga ntgngacagt tcagcgcact natatttcgg 180
ngctcattgg ggacgcagtc agntgnacac tcaggntcag tntagtacac cagacgtgnt 240
ctangagtta cctngcccat gnccnggttc tgtttactna ncaactanat nacatcctcc 300
gcgtngcctg ccngggaaat atccgatant ggaaaacnag ntttcatacg cggtacnctg 360
tcccngggtg ggngccccng tacccaagct tttttgttcc ccttttaagg t 411

<210> 1002
<211> 535
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 17, 20, 23, 27, 28, 29, 31, 35, 38, 67, 68, 74, 75, 77,
79, 92, 95, 98, 149, 158, 168, 185, 187, 202, 220, 267,
272, 273, 284, 292, 302, 304, 308, 321, 327, 330, 354, 360,
362, 372, 373, 391, 392, 407, 425, 426, 446, 459, 464
<223> n = A,T,C or G

<221> misc_feature
<222> 480, 504, 512, 520, 526, 528
<223> n = A,T,C or G

<400> 1002
ccgggcaggt accngtnttn atntctnnnt ngatnacntc cggggataca atactatcca 60
tactccnngc cganntngnt atttgaacat gntanggntg cctcacctgc ctagcgggtt 120
ggatttccca taccgggctt ggctccctna tgggcctncc tgttcccnat cagagggatc 180
taccntntgc ccagaggcag tnacaggcca agggaagcan gcagggcttg atatgaagcc 240
tccctctcaa ccactgtggt ctcagcnact gnncccgctg aggnatcttc anttatgggg 300
gnantttntg ggaaaacgag naggganccn ccttatttta ttattcacat gtcnattttn 360

tntgattcac tnntaagcaa aaagttcgag nntataccaa gtgttcntta aaaaaaagta 420
aaagnngctg tttgggatgc tcgagngggt gcttggcang aaanacaact ggggaatccn 480
aatactttaa taatggacaa agcngtggcg tngcccttcn aaaggngngg ggggc 535

<210> 1003
<211> 503
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 32, 34, 114, 159, 162, 221, 228, 246, 343, 368, 385, 444, 446, 476
<223> n = A,T,C or G

<400> 1003
nttttttttt tttttttttt ttttttttta gnanagacgg ggtttcaccg tgttgcccag 60
gctggtctcg aactcctgag ctcaggcaat ctgcccgcct cagcctccca aagngctagg 120
actacaggct tgagccacag cacccggctg acacttttnt tnttggagcc tcaagcaacc 180
aggctcctcc tgccagcctt taccctcctg ggatgttcta naggacanag ccaggtgaca 240
gccttntgtg gggggagcaag gatcaaggcc ttgcttgaaa gggtgaaagg gtgtgtctcc 300
ccttacttct gggccttcac acacacctcc tttgcctcgc gtnttcaccc tgccgactta 360
aggggcanag ccagacttta actanaaagc catattctca ataactatgc aaggaggaat 420
gccctccttg agggcttgag ccananccttt tcattggggt agtcacgaca gcaaanctat 480
tacctttccc tttttatttg gcc 503

<210> 1004
<211> 470
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 65, 66, 67, 68, 69, 70, 71, 72, 73, 89, 95, 96, 97, 101, 108, 109, 110, 112, 115, 116, 117, 118, 120, 123, 124, 125, 148, 151, 152, 153, 155, 159, 176, 186, 189, 192, 193, 199, 201, 207, 208, 212, 219, 220, 223, 224, 225, 229, 230
<223> n = A,T,C or G

<221> misc_feature
<222> 233, 234, 237, 240, 241, 245, 249, 263, 264, 273, 275, 280, 281, 286, 291, 306, 312, 316, 318, 321, 322, 323, 336, 337, 338, 340, 341, 343, 344, 352, 365, 369, 370, 375, 381, 384, 385, 388, 389, 390, 391, 400, 405, 413, 415, 418, 421
<223> n = A,T,C or G

<221> misc_feature
<222> 425, 428, 434, 435, 438, 440, 446, 450, 451, 454, 455, 456
<223> n = A,T,C or G

<400> 1004
tgagggcgaa ttggagctcc ccgcggtggc ggccgaggta cttttttttt tttttttttt 60
ttttnnnnnn nnnccccccc gggggggggng ggggnnnttt ncccccccnnn cnccnnnntn 120
ggnnnggggga cccctttta aggccccntt nnngnaaana accccttttt cccccncccc 180
cggggnccnc annggggggnc ngggaanncc cnttaaaann ttnnngggnn aanntttnaan 240
ngggntttnc cccccccccg gtnnttttaa aancnaaaan nttttngggg naaaattttt 300
aaaaanaaaa angggnantt nnnttttttt aaaaannncn ntnnttttt tnaaaaaaaa 360
aaaantttnn ggggnttccc nggnnttnnn ncaaaaaccn taggnaaaaa aangnccntt 420
ngccnccnaa gggnngcnan aaaaangggn nggnnngggt aaaaaaaaaa 470

<210> 1005
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 119, 123, 133, 139, 140, 149, 151, 153, 157, 158, 160, 175, 180, 183, 187, 195, 199, 207, 230, 232, 233, 239, 240, 255, 259, 263, 265, 266, 267, 271, 273, 278, 279, 289, 290, 293, 294, 302, 304, 307, 311, 316, 320, 321, 322, 325, 332
<223> n = A,T,C or G

<221> misc_feature
<222> 335, 339, 341, 343, 349, 351, 353, 358, 361, 365
<223> n = A,T,C or G

<400> 1005
gggcgaattg gagctccccg cggtggcggc cgagtacttt tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttgggccnt 120
ttnttttact ttntttaann ttccccccnc nanaacnncn cctttttttt aaacnaaaan 180
ccntccnggg ttccngaang gggggcnaaa aaaaaaggaa aagtcaaaan cnnccggann 240
gggggggggg ggaanaaana aancnnnttg ncngggcnnt taaaattgnn ggnngcttgg 300
ancnccncct ngttgncccn nnganttaac cnaanaaanc ncncccccna ntnaaaangg 360
ncttnccccc cccccccc 378

<210> 1006
<211> 180
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 41, 46, 49, 58, 59, 63, 64, 65, 66, 68, 69, 71, 72, 81, 84, 90, 93, 97, 99, 104, 105, 107, 110, 117, 122, 131, 135, 141, 142, 143, 146, 147, 148, 151, 152, 153, 154, 160, 164, 165, 166, 168, 171, 179
<223> n = A,T,C or G

<400> 1006
aggtactttt tttttttttt ttttttttgg ggggttttttn nttttnttna aacctttnna 60
aannnnanng nnaaaaaaaa ntcntttccn ggntttncna aaannanttn gggtttnggg 120
cntgaaattt naaanccccc nnnggnnnaa nnnnccgggn aaannntncc nttttttttnc 180

<210> 1007
<211> 573
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 512, 523, 558
<223> n = A,T,C or G

<400> 1007
ccgggcaggt acaaatcaat ctaaaagagg tcaacatccc aaaagcaaat gggcaacaaa 60
tatgaacaat tcacagaaaa tgccaagctc ctgatgctga ccctccctca taagaaaact 120

gctaataaaa actcctggag aggatgctca caccaccctg ggagggaaca cagtggtctc 180
tggaggaagg cacagcatat gctttcgagt taccaaggca cacagcattg taggccaggc 240
atctggccta caggatactc acccagtctt tacggagcaa ctgtaaaaaa caacaactgt 300
ttacaattag catagtatca cctggaatct acttacatat cgatcctctc atttcaagag 360
aagaacttct ccaatgcacg tcctaccata ctgtggaaac tgggaactca ttctgcatct 420
agttgggata ggagattaat ttctaaaccc acagccctta ttctgcccac accctgcccc 480
tgatctaccc aaagcatttg caaagtgatg angaggcagc ctnctgggat agaaactttt 540
gaagaaaaag gccagttnca gatgggctgg gaa 573

<210> 1008
<211> 566
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 110, 114, 122, 129, 132, 134, 143, 149, 151, 156, 158, 159,
161, 163, 164, 168, 179, 180, 182, 189, 192, 194, 208, 211,
212, 220, 226, 228, 229, 234, 242, 245, 250, 251, 256, 259,
260, 269, 283, 289, 294, 300, 301, 302, 304, 310, 312
<223> n = A,T,C or G

<221> misc_feature
<222> 320, 324, 327, 329, 330, 332, 334, 337, 348, 353, 362, 368,
375, 381, 385, 389, 403, 411, 414, 417, 418, 424, 427, 428,
430, 431, 440, 454, 462, 465, 467, 468, 469, 485, 486, 488,
495, 498, 513, 518, 519, 521, 524, 525, 527, 530, 533
<223> n = A,T,C or G

<221> misc_feature
<222> 547, 549, 550
<223> n = A,T,C or G

<400> 1008
ggagctcccc gcggtggcgg ccgcccgggc aggtactttt tttttttttt tttttttttt 60
tccttttttt tttttttttt tttttttttt tttttttttt tttttttttn gccntcaatt 120
tnttaaaana ancntgttta gcnggtttna ncaatngnnt ngnngttngg ggtaaaaann 180
cntaaaaang anangggggg gttggcanca nnccgaagtn ggtttntnnc catnccctgc 240
anttntgggn nccaanggnn ttgcaaaang ttaaaataaa tcncaaagnc gggnggcatn 300
nntnaatggn anaaaccccn caanatngnn tnanagnttc atcccgtngg ggnaaaaaaa 360
anattccntc aattnattta ngggntttng gaggggggcct tgncgttcta nganccnntt 420
gaanaanntn ntttgttttn aagcccttta aacncttggg gnttngnnnc gggctttgga 480
aaaanncnct ttttnccnaa aagggggggc ggnacccnna nccnncngtn aanactttgt 540
ttggggngnn gggggccccc cccccc 566

<210> 1009
<211> 697
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 523, 536, 543, 571, 598, 605, 607, 626, 650, 656, 690
<223> n = A,T,C or G

<400> 1009
aggtacaaaa gccaagatgc ccattgtggg cctgggcact tggaggtctc ttctcggcaa 60
agtgaaagaa gcggtgaagg tggccattga tgcagaatat cgccacattg actgtgccta 120
tttctatgag aatcaacatg aggtgggaga agccatccaa gagaagatcc aagagaaggc 180

tgtgatgcgg gaggacctgt tcatcgtcag caaggtgtgg cccactttct ttgagagacc 240
ccttgtgagg aaagcctttg agaagaccct caaggacctg aagctgagct atctggacgt 300
ctatcttatt cactggccac agggattcaa gactggggat gacttttcc ccaaagatga 360
taaaggtaat atgatcagtg gaaaaggaac gttcttggat gcctgggagg ccatggagga 420
gctggtggac gaggggctgg tgaaagccct tggggtctca aatttcaacc actttcaaga 480
tccgagaggc tttttgaacc aaacctgggc tggaatttaa ccnagtgact taaccnaggt 540
tgnagtgtca cccattacct taccccagga naaaactgat cccagttccc ttgccccngg 600
ccggntntta agaactaagt gggatncccc ccgggcttgc agggaattcn atatcnaagc 660
ctttattcga taccccttcg accctccaan gggggg 697

<210> 1010
<211> 131
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 72, 75, 84, 99, 120
<223> n = A,T,C or G

<400> 1010
tttttaagga ttcaagaggt gatctggctt ttgtgaaagt gtacgcgggg acggcttctg 60
ctggcggccg cnganacgca aagncttgag cagcgcggna ggcaccatgt tcctgactgn 120
gctcctctgg c 131

<210> 1011
<211> 648
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 14, 32, 38, 39, 47, 49, 50, 56, 62, 68, 70, 77, 80, 87, 89, 91, 93, 96, 99, 100, 102, 104, 106, 114, 120, 129, 135, 140, 145, 146, 164, 167, 180, 187, 189, 195, 200, 213, 216, 220, 234, 238, 242, 245, 246, 251, 253, 265, 268, 271
<223> n = A,T,C or G

<221> misc_feature
<222> 279, 282, 285, 291, 317, 323, 324, 330, 332, 335, 349, 351, 374, 375, 395, 404, 408, 439, 447, 455, 461, 469, 481, 497, 500, 506, 510, 548, 549, 559, 571, 574, 610, 627, 638
<223> n = A,T,C or G

<400> 1011
natccagata cttntgcctg ccttgaagtg anggcctnnc accaaangnn ccatgngcac 60
cntgctgncn atgaacnggn actcccncnt nanagnctnn tntngnatct tatnttggan 120
ggcttatcnc acctnatgtn gatgnncata gaattaggca cagngantgg ggcgatattn 180
tggatanang gccancttgn ccggtttttt canttngccn agaagagact gaantgcnca 240
anacnngccc ntnacacatg tattnttntt ntaagagang anacnttgcc ntgttgccca 300
ggctggacta acactgncag gtnnaaacan tnctncgaac tcctgaggna nctggaatta 360
caccacactg agcnncacca tattggtctt atccncagac cacnttgncc tgccccacac 420
agtccagttt atccaaacna aggcttnctg ggggncttct ntttgccang gaatatctgg 480
naggatacac agtgtanaan aatttntcan accaaaagga aggaaaagcg aatttaattt 540
tatggatnnt gccccttng ccctatgcta nctnaaaagg tcaaattgcc ctttttcatt 600
caagggttan ttcctgaaaa tggtccntcc agggtggngg gggggggg 648

<210> 1012
<211> 745

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 401, 449, 487, 504, 559, 577, 605, 621, 629, 640, 642, 651, 652, 658, 660, 676, 677, 693, 696, 700, 706, 709, 723
<223> n = A,T,C or G

<400> 1012
ccgggcaggt acaaaagcca agatgcccat tgtgggcctg ggcacttgga ggtctcttct 60
cggcaaagtg aaagaagcgg tgaaggtggc cattgatgca gaatatcgcc acattgactg 120
tgcctatttc tatgagaatc aacatgaggt gggagaagcc atccaagaga agatccaaga 180
gaaggctgtg atgcgggggg acctgttcat cgtcagcaag gtgtggccca ctttctttga 240
gagacccctt gtgaggaaag cctttgagaa gaccctcaag gacctgaagc tgagctatct 300
ggacgtctat cttattcact ggccacaggg attcaagact ggggatgact tttccccaa 360
agatgataaa ggtaatatga tcagtggaaa aggaacgttc nttggatgcc tgggaggcca 420
tggaggagct ggtggaccga aggggcttng tgaaagccct tggggtctca aattttcaac 480
ccacttncag atcggagagg cttntttgaa acaaaccttg gacctgaaaa atattaaacc 540
caggtggacc ttaaacccng ggtttggagt tgttcanccc cattaccctt taaccgccag 600
ggaanaaaaa ctggattcca ntaaccctnc ggcccgcttn tnagaaaact nngtgggnan 660
tcccccccgg gcctgnnaag gaaattttcg atnttncaan cctttnttng gataccccgt 720
ccnaacccctt cgaagggggg ggggc 745

<210> 1013
<211> 767
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 360, 383, 401, 409, 411, 412, 414, 416, 446, 450, 458, 473, 474, 476, 484, 490, 494, 501, 514, 522, 532, 541, 543, 544, 555, 558, 562, 579, 582, 583, 595, 596, 600, 607, 615, 622, 626, 633, 634, 639, 640, 644, 645, 646, 647, 658, 662
<223> n = A,T,C or G

<221> misc_feature
<222> 664, 689, 703, 715, 720, 730, 744, 745, 752, 756
<223> n = A,T,C or G

<400> 1013
ccaagatgcc cattgtgggc ctgggcactt ggaggtctct tctcggcaaa gtgaaagaag 60
cggtgaaggt ggccattgat gcagaatatc gccacattga ctgtgcctat ttctatgaga 120
atcaacatga ggtgggagaa gccatccaag agaagatcca agagaaggct gtgatgcggg 180
aggacctgtt catcgtcagc aaggtgtggc ccactttctt tgagaggccc cttgtgagga 240
aagcctttga gaagaccctc aaggacctga ggctgagcta tctggacgtc tatcttattc 300
actggccaca gggattcaag actggggatg acttttcccc caaagatgat aaaggtaatn 360
tgatcagtgg aaaaggaacg ttnttggatg cccggaaggc nttggaagna nntntnggcc 420
aagggcttgt taaaaccctt tggggntttn aaattttnac cccttttcca aannengaaa 480
gggnttttgn aaanaaaccc nggactgaaa attnaacccc gngggcctta ancccgtttg 540
ngnngtgtcc ccttntcnct tnaccccggg ggaaaaacng tnntccccag ctttnncccn 600
ccccaanggg ggttnttacc cntttngggg gtnnaaaann cccnnnnggg gtttttcncg 660
ananaaaaac tttggggccc aaaaccttng gggacccctt tcnctttggt ggggngggan 720
cccccaaaan ttaaggggaa attnntttgg cnaaancccc aaaaaaa 767

<210> 1014
<211> 276
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 25, 26, 34, 36, 44, 51, 84, 86, 90, 92, 93, 97, 98, 99, 101, 104, 106, 109, 110, 111, 113, 114, 128, 130, 131, 138, 139, 141, 146, 148, 149, 151, 154, 155, 157, 161, 165, 171, 173, 177, 190, 204, 211, 220, 222, 223, 235, 239, 250
<223> n = A,T,C or G

<221> misc_feature
<222> 251, 260, 261
<223> n = A,T,C or G

<400> 1014
cgctcattga ggatcttcat gaggnngtac ggtnangttc cggncagcca ngtccagacg 60
catgatggcg tgggggaggg cgtncncctn gnngatnnnc nccntntgnn ntnnccaata 120
ttgagaanan ntctcccnnc ntgganatnna nccnnangct natanggaca ntncggnctg 180
aatggccacn taccttggtc tttntaaaac natggggatn cnnaagtctg taatnaatna 240
agatctcacn ntaatatatn ntcgctgacc tcttac 276

<210> 1015
<211> 408
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 385
<223> n = A,T,C or G

<400> 1015
tggagctccc cgcggtggcg gcccgaggta caaaagccaa gatgcccatt gtgggcctgg 60
gcacttggag gtctcttctc ggcaaagtga aagaagcggt gaaggtggcc attgatgcag 120
aatatcgcca cattgactgt gcctatttct atgagaatca acatgaggtg ggagaagcca 180
tccaagagaa gatccaagag aaggctgtga tgcgggagga cctgttcatc gtcagcaagg 240
tgtggcccac tttctttgag agaccccttg tgaggaaagc ctttgagaag accctcaagg 300
acctgaagct gagctatctg gacgtctatc ttattcactg ccacagggat tcaaggtttg 360
agtgactccc tttctcagcc tctantttct gagctgttgc aggaattc 408

<210> 1016
<211> 219
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 39, 41, 42, 49, 50, 60, 63, 66, 67, 73, 74, 76, 77, 80, 82, 83, 86, 89, 90, 99, 105, 109, 110, 111, 120, 124, 128, 134, 136, 142, 143, 147, 148, 152, 153, 154, 157, 158, 161, 165, 166, 167, 173, 174, 175, 178, 184, 185, 194, 206
<223> n = A,T,C or G

<221> misc_feature
<222> 207, 210
<223> n = A,T,C or G

<400> 1016
aggtactttt tttttttttt ttggtttttt tggaaanatnc nncccgggnn gggaaggggn 60

aanttnnccc ccnngnnccn tnnttngann ggggaaccnt ttttnaagnn nccttttcgn 120
aaanaaancc ttantncccc tnncccnngg gnnncanngg ngggnnngga aannncanta 180
aaannttaat gggnaaaact ttaaannggn ttttccccc 219

<210> 1017
<211> 253
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 18, 22, 23, 34, 37, 41, 42, 45, 47, 51, 64, 66, 67, 69,
71, 72, 73, 76, 83, 87, 88, 95, 98, 100, 104, 118, 127,
141, 147, 149, 164, 168, 175, 181, 188, 197, 198, 202, 203,
225, 229, 246
<223> n = A,T,C or G

<400> 1017
gtgtttctgg taaancanac anngctccgg ggantangca nntananaca naaaaacaaa 60
aagncnnang nnnganaaaa aanaaanntt aaggntanan taanactaaa aaaaaaanat 120
tggggganctc cccctgtaac ntgaaanana aaatgaatgc gggncgtncc ccgtnaactc 180
ncacattnca actaatnntg gnnacgaaaa atcacattga acccnggana cggacgtttc 240
attganccga aat 253

<210> 1018
<211> 834
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 417, 419, 420, 424, 425, 440, 447, 450, 458, 460, 483, 484,
485, 486, 487, 488, 489, 491, 499, 501, 505, 514, 523, 541,
543, 548, 567, 568, 570, 571, 572, 573, 581, 582, 583, 584,
585, 586, 587, 592, 594, 602, 604, 608, 611, 619, 634
<223> n = A,T,C or G

<221> misc_feature
<222> 635, 636, 638, 643, 645, 646, 647, 648, 649, 650, 651, 652,
654, 669, 671, 675, 676, 679, 682, 685, 687, 689, 690, 704,
708, 716, 718, 719, 722, 723, 725, 729, 730, 731, 732, 734,
736, 737, 739, 741, 742, 743, 760, 763, 764, 774, 775
<223> n = A,T,C or G

<221> misc_feature
<222> 777, 783, 786, 792, 795, 797, 798, 806, 808, 809, 811, 817,
818, 820, 822, 823, 824, 825, 826
<223> n = A,T,C or G

<400> 1018
tcaagctgga ggtcattaca cctactctga gaatcgtgtg gaaaaagacg gcctgattct 60
tacaagccgg gggcctggga ccagcttcga gtttgcgctt gcaattgttg aagccctgaa 120
tggcaaggag gtggcggctc aagtgaaggc tccacttgtt cttaaagact agagcagcga 180
actgcgacga tcacttagag aaacaggccg ttaggaatcc attctcactg tgttcgctct 240
aaacaaaaca gtggtaggtt aatgtgttca gaagtcgctg tccttactac ttttgcggaa 300
gtatggaagt cacaactaca cagagatttc tcagcctaca aattgtgtct atacatttct 360
aagccttgtt tgcagaataa acagggcatt tagcaaacta aaaaaaaaaa aaaaaantnn 420
aaannaaaaa aaagggaaan aaaaaanaan aaaaaaangn tagaaaaaaa aaaaaggaat 480
ttnnnnnnng ngggggggnc ncctnttttt ttanaaaaaa aanccccccc cccccccccc 540

ngngaggnaa aaaaaaaaaa aaaaaannan nnngggttgt nnnnnnntat gntntggggg 600
cncncctntt ngggggggna aaaaaaaaaa aaannncncc ccncnnnnnn nnanaaaaaa 660
aaaaaaaant ntttnnccnc cnctntntnn gggggggggg gccncccncc ccccanannt 720
gnntntttnn nnangnntnt nnncccccg cccccccccn cannaaaaaa aaanntntct 780
ttnccncctt cnaanannaa aaaaanannc ncccccnngn gnnnnngggg gggg 834

<210> 1019
<211> 604
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 185, 196, 212, 214, 219, 221, 223, 229, 230, 231, 233, 235,
237, 240, 242, 243, 247, 248, 249, 251, 252, 253, 255, 256,
258, 262, 264, 269, 270, 272, 273, 279, 287, 288, 291, 295,
296, 297, 298, 302, 305, 306, 308, 311, 317, 318, 326
<223> n = A,T,C or G

<221> misc_feature
<222> 327, 330, 331, 344, 346, 348, 350, 354, 355, 358, 366, 373,
381, 382, 389, 390, 391, 392, 393, 396, 397, 406, 410, 411,
414, 424, 428, 430, 437, 444, 450, 452, 454, 470, 482, 485,
486, 492, 494, 495, 499, 501, 504, 514, 515, 519, 525
<223> n = A,T,C or G

<221> misc_feature
<222> 526, 527, 528, 533, 543, 544, 551, 552, 553, 554, 555, 556,
557, 558, 560, 562, 563, 564, 565, 566, 567, 569, 570, 573,
574, 578, 579, 580, 581, 582, 586, 587, 595, 597
<223> n = A,T,C or G

<400> 1019
gtcgacccac gcgtccgtcc aggtcggttt ctatctactt caaattcctc cctgtacgaa 60
aggacaagag aaataaggcc tacttcacaa agcgccttcc cccgtaaatg atatcatctc 120
aacttagtat tatacccaca cccacccaag aacagggttt aaaaaaaaaa aaaaaaaaaa 180
ggggnggccg ttaaantatt ttaaaaaaaa ancntcccnc ncntccccnn nancntnaan 240
annaaannna nnncnntngt tntngtaann tnntttttng ccctttnnat ngggnnnnaa 300
anaanncntt nccttcnnaa ttttcnnaan naaacctttt tttncncngn tttnnatngg 360
gggttngccc aanctcataa nngtttttnn nnnggnnggg accccngggn nccnacccca 420
aatnaatncn ttttccnttt cctngttaan tnantcgttg ccctgggccn ttcggttggg 480
gnaanngggtt tnanntccnt naangggggt attnngggnt tcccnnnntt tanaaaaaaa 540
aannaactct nnnnnnnngn gnnnnnnann aanngggnnn nncccnnggg ggggngngtt 600
tttt 604

<210> 1020
<211> 722
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 23, 106, 108, 130, 149, 216, 243, 249, 268, 274, 281,
288, 300, 306, 313, 315, 322, 331, 335, 337, 345, 352, 354,
387, 414, 418, 421, 422, 427, 428, 429, 430, 434, 435, 436,
442, 444, 453, 454, 455, 456, 462, 468, 482, 496, 498
<223> n = A,T,C or G

<221> misc_feature

<222> 504, 508, 517, 520, 521, 523, 528, 530, 540, 541, 543, 545, 548, 551, 563, 565, 570, 571, 581, 582, 583, 585, 586, 600, 602, 619, 620, 623, 631, 634, 638, 639, 653, 655, 656, 673, 677, 681, 682, 683, 684, 686, 692, 693, 694, 695, 696
<223> n = A,T,C or G

<221> misc_feature
<222> 698, 700, 702, 717
<223> n = A,T,C or G

<400> 1020
ctccctgcta tcattnggat tcnttaaaaa ttaaatcatc tcataagctt acaaatgttg 60
atttttattt attttttca tgataaaact ttcatatttc catggngnat ggaactataa 120
ttttttatgn gtttctttac gtgtaaggng agagtggcaa gaacataaaa ccttcacctg 180
ttagtcttag attttcttgg gctggggagg ggcagnaggg ctggaaccaa tcactgatgg 240
gcncccagnc cctggactga aatttccngg gaangcttaa ncaaactntg tgggggggn 300
cccttnagaa atngnccccc cngcaaacac naggncnccc cgggngcccc tnanaaaccc 360
cccctaaaag gccccccaa aaggggnttt tcttttttaa aaaaaccccc cacngggngg 420
nngcttnnnn aaannnaagg gngnataaaa aannnncccc cngggggnaa aaaaaaaaa 480
anaccccccc cccccngnga gggngggngg gggggnctn nancaaancn cccccccggn 540
nananaanaa ncccaccccc ccncncgccn nggggggggg nnnanncccc cccccccccn 600
cnaaaaaaaa aaaaaaaann ccnacccccc nccnccccnna aaaaaaaaaa aananngccc 660
cccccccccc ccncggnaca nnnnantaaa annnnntncn cnccccccccc ccccccnccg 720
cg 722

<210> 1021
<211> 618
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 356, 427, 443, 450, 457, 472, 476, 490, 493, 505, 523, 531, 541, 544, 549, 554, 559, 562, 583, 591
<223> n = A,T,C or G

<400> 1021
tncgggcagg ttcgcggggg attaatgggt tatcacagga atgggactgg tggctttata 60
agaagaggaa aagagaactg agctagcatg cccagcccac agagagcctc cactagagtg 120
atgctaagtg gaaatgtgag gtgcagctgc cacagagggc ccccaccagg gaaatgtcta 180
gtgtctagtg gatccaggcc acaggagaga gtgccttgtg gagcgctggg agcaggacct 240
gaccaccacc aggaccccag aactgtggag tcagttggca gcatgcagcg ccccccttggg 300
aaagctttag gcaccagcct gcaacccatt cgagcagcca cgtaggctgc acccancaaa 360
agccacaggg cccggggcta cctgaggcct ttgggggggc ccaattccct gcttccaagt 420
ggttgtnccg tggagggcaa gcnaccacgn aaagttnaaa aagtaagatt tntttntttt 480
ttcccaccan gantaccttt ttttnttctt ccccattgac ccnttttaac nagcaaattt 540
nggntttcna tttnccccnt cnaccttttc ccaaggcctt ganttttga ngggaaaaac 600
ttttttaaag taaaaaaa 618

<210> 1022
<211> 196
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 28, 41, 42, 49, 50, 51, 52, 53, 55, 56, 57, 58, 59, 61, 63, 64, 65, 66, 67, 73, 79, 81, 83, 84, 86, 87, 89, 92, 93, 96, 97, 100, 101, 102, 103, 106, 108, 110, 115, 116, 120,

123, 126, 129, 136, 139, 140, 142, 143, 145, 149, 156, 161
<223> n = A,T,C or G

<221> misc_feature
<222> 162, 163, 164, 165, 166, 169, 171, 176, 177, 183, 191
<223> n = A,T,C or G

<400> 1022
aggtactttt tttttttttt tttttttnaa aaaaaaattt nntttttttnn nnnannnnng 60
ntnnnnnggg ccntttttng ncnnanntna annttnnccn nnnggntnan ccccnntttn 120
aanccnaanc cccccnaann anngnaaana aaaaancctt nnnnnnggnc nggttnnttt 180
ttnggttttt naaaaa 196

<210> 1023
<211> 346
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16, 21, 28, 40, 47, 50, 54, 55, 56, 57, 59, 64, 70, 71, 72,
79, 81, 85, 103, 104, 111, 113, 114, 129, 130, 131, 132,
146, 157, 158, 181, 184, 185, 189, 190, 191, 199, 200, 203,
205, 206, 210, 213, 214, 215, 216, 221, 225, 226, 230
<223> n = A,T,C or G

<221> misc_feature
<222> 231, 243, 244, 249, 250, 251, 253, 254, 255, 257, 258, 261,
265, 266, 268, 269, 285, 287, 291, 292, 300, 303, 324, 328
<223> n = A,T,C or G

<400> 1023
cggtggcggc cgcccnggca ngaacttntt ttttttttttn tttgaanggn atannnntnt 60
tatngatacn nncgaactng ngggnggggcc ccgaacccgg gtnnagggcc ntnnaatgag 120
tgtttaatnn nngcgcttgg cggtantcaa aaaatanntg ttttctgaaa aaaaaaaaaa 180
nccnntccnn naaaacccnn ccngnnggcn ttnnnnccgg naaannaaan ntttgggggg 240
ggnnttttnn ngnnnanntg ngggnncnna acttttaaaa aaccntnttt nngggggggn 300
ttntttttaa aaaaaggaac cccnttgncc ttggggaaaa aaaaaa 346

<210> 1024
<211> 863
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 526, 545, 547, 549, 555, 573, 583, 593, 612, 613, 622, 656,
657, 658, 669, 671, 674, 684, 685, 689, 693, 696, 706, 708,
716, 718, 721, 722, 723, 726, 731, 735, 741, 744, 749, 752,
754, 757, 761, 765, 766, 768, 779, 786, 787, 789, 790
<223> n = A,T,C or G

<221> misc_feature
<222> 793, 795, 798, 799, 803, 807, 813, 815, 817, 829, 833, 846,
848, 849, 863
<223> n = A,T,C or G

<400> 1024
acaaaagcca agatgcccat tgtgggcctg ggcacttgga ggtctcttct cggcaaagtg 60

aaagaagcgg tgaaggtggc cattgatgca gaatatcgcc acattgactg tgcctatttc 120
tatgagaatc aacatgaggt gggagaagcc atccaagaga agatccaaga gaaggctgtg 180
atgcgggagg acctgttcat cgtcagcaag gtgtggccca ctttctttga gagacccctt 240
gtgaggaaag cctttgagaa gaccctcaag gacctgaagc tgagctatct ggacgtctat 300
cttattcact ggccacaggg attcaagact ggggatgact ttttccccaa agatgataaa 360
ggtaatatga tcagtggaga aggaacgttc ttggatgcct gggaggccat ggaggaactg 420
gtggacgagg ggctggtgaa agcccttggg gtctcaaatt tcaaccactt tcccagatcg 480
aagaggctct ttgaacaaac ctggactgaa atattaaaac caagtngact taacccaggt 540
tgagntntna cccantacct taacgccagg aanaaaactt ggntcccagt tancctgccc 600
ccggggccgg cnncgttttt angaaactta ggtgggaatc ccccccgggc cttctnnnaa 660
atttccgana nttnaaggct tttnngatna ccnggntaac cctttnangg gggggncncc 720
nnngtncccc natcnttttt nttnccttnt ancnganggg ntaanntncc ccctttggna 780
aaaaanntnn ggncnttnnc ttntttncct ggngntnaaa attgttttnt ccntttaaaa 840
atttgnannc cccccccccc ccn 863

<210> 1025
<211> 450
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 54, 57, 62, 69, 75, 76, 97, 99, 125, 129, 160, 166, 168,
223, 226, 229, 250, 253, 258, 278, 297, 308, 322, 339, 345,
394, 419, 426, 429, 430
<223> n = A,T,C or G

<400> 1025
tttccctgct tttaaatata ttattcattg acggtagagg aaaagaaaag gcnntgngcc 60
tncttgctna gtcanngccc agagcactgg gcaaacnant ttttcacctt ttgcctggcg 120
ccaangaang gaaatgtttg gcttttacat gacaatttgn ttggtntnac ggtgaaaaaa 180
accttttctt taggaaaagg aggccatttc ttttgaggaa aantanaant ttagaatttg 240
gggttataan ttntttgngg ttaataaaaa ttggttangg gggggtaca aaacaantat 300
tcttggtnct ttcccaattt tncctccaac cttattatna attcnccacc cccctttttt 360
tccccccttgt ttccctttt aaaaaatttt taangaataa atttttgggg aattttttna 420
aaaaangtnn tttccttttt tcctttttt 450

<210> 1026
<211> 331
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 36, 37, 38, 41, 46, 47, 53, 54, 55, 56, 57, 58, 59, 60,
61, 62, 63, 64, 69, 70, 80, 83, 87, 88, 94, 95, 96, 97,
98, 99, 102, 103, 111, 112, 113, 114, 115, 116, 117, 118,
119, 120, 121, 126, 130, 136, 137, 139, 142, 143, 144, 145
<223> n = A,T,C or G

<221> misc_feature
<222> 150, 164, 168, 169, 170, 173, 179, 182, 183, 188, 189, 190,
193, 198, 204, 208, 209, 214, 215, 227, 228, 235, 237, 238,
239, 241, 242, 243, 249, 250, 252, 256, 257, 270, 271, 276,
284, 285, 300, 301, 302, 308, 312, 313, 316
<223> n = A,T,C or G

<400> 1026
aggtactttt tttttttttt ttttttttta angggnnngg nttttnnggg ccnnnnnnnn 60

nnnnggggnn gggccccccn aangggnncc gggnnnnnna anngtttttt nnnnnnnnnn 120
ntgggncccn aaaaannant tnnnnttttn aaaaaaaaaa aaanccccnnn ccnaaaaanc 180
cnnccggnnn gcnttttncc cggnaaanna aaannttttgg ggggggnntt ttttngnnna 240
nnngggggnn cntaanntttt aaaaaccccn nttccngggg gggnnttttt ttaaaaaaan 300
nnaccccntt gnnccnttgg gaaaaaaaaa a 331

<210> 1027
<211> 595
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 171, 182, 190, 208, 263, 264, 270, 272, 297, 324, 338, 372,
379, 381, 382, 388, 401, 408, 409, 410, 411, 412, 421, 423,
438, 442, 446, 454, 455, 457, 461, 476, 480, 481, 483, 488,
489, 490, 497, 501, 506, 507, 509, 510, 517, 519, 541
<223> n = A,T,C or G

<221> misc_feature
<222> 545, 547, 576, 577, 579, 581
<223> n = A,T,C or G

<400> 1027
ttgaacaagc cggttgacgt ccagttcaag gtaacgctcg ccgcggcgca tggcctcggg 60
gttaccgaac aggaacagaa tacgggtgcg gggcttgatc tcccacgggc aatgccttgc 120
agcaagcggt cggccaattc gatcggcgcg gtttcgttgc catggatgcc ngacgacagc 180
ancacgtcgn tgcgttgtcc cgcgcctnaa gaggccgcac ttcagcgcgc cttacttgag 240
ccaagcgcag ttgcaccccc gtnnacagtn antttgaatt tttttgcccc cgttccncga 300
ccgggcgaag ggttaatttt caanccattt ttgcccgngg ggcgaaacat aaaaacaaat 360
ttttttttttg tnggttgcna nnccaaanaa ccgggggaca ntaaatcnnn nntaaataaa 420
nanttaaaaa ggggggngt tnttanaaaa aaannantgg nccccccccg gggggnggggn 480
ngnaaatnnn aaatttnttt nttttnncnn ccccccntng gggggggggg ggggggggccc 540
ncccnanttt tttttttttt tttttaataa aaaaannang ncccccccccc cccaa 595

<210> 1028
<211> 371
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 13, 14, 15, 18, 19, 25, 27, 28, 31, 34, 40, 46, 51, 55,
56, 60, 63, 71, 77, 85, 92, 93, 98, 105, 110, 117, 124,
141, 153, 160, 162, 184, 190, 218, 256, 259, 270, 276, 277,
297, 304
<223> n = A,T,C or G

<400> 1028
aggtacccgg ngnnnccnnc atggncnngg nctngaattn cgcatnagca nctgnntatn 60
ganatacccta ngccggnaga ggganaacac anntgganaa aatcngcagn tgaaacngcc 120
ttgnccggac ttaacactca ngcctgtgaa tcnggaaatn cnaagacctc caaaaaagga 180
ccanttcctn ggatgtgccc cctcacagag agatgaangg gcaccagaaa acatctgaaa 240
cggaagaggg gacagngcnt attcaagaan gtgcanngg tactggggaa gacccancca 300
gtgnggctat tgccagcatc cagtcatctg ccaccttccc tgaccccaac gtcgagtgat 360
gtacctgccc g 371

<210> 1029
<211> 72

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 29
<223> n = A,T,C or G

<400> 1029
gtatgcttga aacaacaaca gctntcatng aatattcaga gagtccacta ggtgccaggc 60
aatgtctgaa gc 72

<210> 1030
<211> 177
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 72
<223> n = A,T,C or G

<400> 1030
tgcagaattc gccctttcga gcggcccgcc cgggaggcta agggaggcta tgggaggcta 60
agggaggctc angtaaggag gatctcttga gcctgggagg cagaagctgc agtgaaccaa 120
aatggcacca ctgcactcca gcctgagtaa cagagtaaga ctctgtctca aaaaaag 177

<210> 1031
<211> 100
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 25, 28, 31, 32, 33, 37, 50, 51, 54, 55, 56, 58, 60, 61,
62, 63, 67, 76, 83, 89, 91, 93
<223> n = A,T,C or G

<400> 1031
acttaaantt tttttttttt tttcnttntg nnngggnaaa aaatttttttn nttnnnancn 60
nnntttnttt gggccntttt aanggggcna ntnttttttt 100

<210> 1032
<211> 178
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 60, 65, 66, 67, 72, 74, 75, 76, 82, 83, 84, 86, 91, 92,
100, 105, 109, 110, 111, 116, 117, 118, 124, 125, 126, 132,
133, 134, 135, 137, 139, 140, 142, 144, 147, 148, 149, 150,
151, 152, 160, 161, 162, 164, 165
<223> n = A,T,C or G

<400> 1032
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt ttnggggaan 60
ggttnnnagg gncnnnaaaa cnnngngggg nngggccccn aaaangggnn nggggnnnaa 120
aaannntttt tnnnnanann tntnggnnnn nnaaaaaaan nntnnttttt taaaaaaa 178

<210> 1033
<211> 20
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13
<223> n = A,T,C or G

<400> 1033
tggatatctg canaattcgc 20

<210> 1034
<211> 54
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 39
<223> n = A,T,C or G

<400> 1034
ccctttcgag cggccgcccg ggcaggtacg cgggatncnc acatgatcac acac 54

<210> 1035
<211> 55
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 9, 10, 11, 17, 18, 25, 26, 29, 40
<223> n = A,T,C or G

<400> 1035
cccttancnn nggcccnncc gacgnncang agtgctcttn tgcaggccac agggg 55

<210> 1036
<211> 54
<212> DNA
<213> Homo sapiens

<400> 1036
gggcgaattg gagctccccg cggtggcggc cgaggcactt tttttttttt tttt 54

<210> 1037
<211> 571
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 142, 218, 296, 364, 367, 430, 467, 487, 506, 507, 524, 538,
558
<223> n = A,T,C or G

<400> 1037
tccccgcggt ggcggccgag gtactttttt tttttttttt tttttttttt tgagacagac 60
ttttgctctt attgcccagg ttagagtaca gtggcacgat ctcagctcac tgaaacctcc 120
gcctcccggg ttcaagcaat tntcctgcct caacctccca agtagctggg atacagttgc 180
ctgccaccac acccagctac tttttgcatt tttagtanaa atggggtttc accatgttgg 240
ccaggctggt cttgaattcc tgaccccatg atccaccctc cttggcctcc caaagngctg 300
ggattacagg cgtgagccac tgagcctggc caatttttat ttctgaaaca tttattatta 360
atgnganggg aaaattaccc agaatatatg ttcatttctt ataaagttaa gtcttccaaa 420
acctggtttn acaaaaaact gagggtaaat tcagggctca aatatanaaa cttaaacttt 480
tcttggnaat ccaattaaaa atgtanntct tagctgggcc aggngggctc acccccctnta 540
atcccagcac tttggggngg ccccgggggg g 571

<210> 1038
<211> 22
<212> DNA
<213> Homo sapiens

<400> 1038
ttggagctcc accgcggtgg cg 22

<210> 1039
<211> 152
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 32, 35, 36, 43, 49, 50, 51, 52, 53, 55, 59, 60, 61, 77, 79, 85, 86, 92, 94, 95, 98, 99, 100, 107, 108, 109, 110, 111, 112, 114, 115, 117, 123, 133, 134, 135, 136, 137, 138, 139, 140, 141
<223> n = A,T,C or G

<400> 1039
actttttttt tttttttttt tttttttgggg gnacnngttt ttnggggcnn nnncngggnn 60
ngggggggggc cccccccnang ggggnngggg cntnnaannn tttttnnnn nncnntntgg 120
ggncccaaaa aannnnnnnn ntttttaaaa aa 152

<210> 1040
<211> 169
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 41, 42, 43, 50, 52, 56, 57, 58, 63, 64, 65, 66, 67, 68, 69, 70, 72, 73, 75, 90, 91, 99, 105, 106, 107, 108, 109, 110, 113, 114, 116, 121, 122, 123, 124, 125, 126, 128, 130, 131, 132, 137, 138, 141, 148, 149, 151, 152, 153, 156, 157
<223> n = A,T,C or G

<221> misc_feature
<222> 160, 161
<223> n = A,T,C or G

<400> 1040
ccgggcaggt actttttttt tttttttttt tttttttaaa nnnggggaan gntttnnngg 60
gcnnnnnnnn gnncngggggg ggggcccccn naaaggggnc cgggnnnnnn aannngntttt 120
nnnnnncngn nntgggnncc naaaaaanna nnnggnnttn naaaaaaaa 169

<210> 1041
<211> 40
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 16
<223> n = A,T,C or G

<400> 1041
ggagctccac cgcggnggcg gccgaggtac tttttttttt 40

<210> 1042
<211> 44
<212> DNA
<213> Homo sapiens

<400> 1042
gattggagct ccccgcggtg gcggccgagg tacttttttt tttt 44

<210> 1043
<211> 23
<212> DNA
<213> Homo sapiens

<400> 1043
agctccccgc ggtggcggcc gag 23

<210> 1044
<211> 44
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4
<223> n = A,T,C or G

<400> 1044
ggcnaattgg agctccccgc ggtggcggcc gaggtacttt tttt 44

<210> 1045
<211> 290
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 207, 268
<223> n = A,T,C or G

<400> 1045
cggccgcccg ggcaggtaca gctactttgg aggacagtgt ggtggtctct cataatccta 60
aacatactct tagaatatga accagcaaca ctgctcccca gtatttacac agatgggttg 120
aaaacttctg cccacaaaga aatctgcacg tgcacgttta tggcagcttt ctttatcact 180
gccaaaaact tggaaggaac caagatntcc ttcaataaat gtcttactac attctggttg 240
ttgtaacaaa ataccataca ctgcgtanct gaggcaggag gatcacttga 290

<210> 1046
<211> 49
<212> DNA
<213> Homo sapiens

<400> 1046
ttggagctcc ccgcggtggc ggccgaggta cttttttttt ttttttttt 49

<210> 1047
<211> 22
<212> DNA
<213> Homo sapiens

<400> 1047
tggagctccc cgcggtggcg gc 22

<210> 1048
<211> 149
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 31, 33, 34, 40, 44, 48, 49, 50, 51, 52, 54, 56, 63, 79,
80, 87, 88, 90, 91, 94, 95, 96, 104, 105, 112, 118, 130,
132, 133, 134, 135, 137
<223> n = A,T,C or G

<400> 1048
acttttttttt tttttttttt taaggggtna ngnnttaacn ggcnatannn nnancngggg 60
gtnggccccc acaaagggnn ccgggcnnan naannntttt ttannaacag gnatgggnac 120
aaaaaaatan cnnnngnttt taaaaaaaa 149

<210> 1049
<211> 39
<212> DNA
<213> Homo sapiens

<400> 1049
ttggagctcc ccgcggtggc ggccgaggta ctttttttt 39

<210> 1050
<211> 149
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 68, 70, 74, 76, 87, 88, 89, 97, 98, 99, 100, 101, 104, 105,
107, 117, 123, 127, 129, 130, 136, 137, 138, 142
<223> n = A,T,C or G

<400> 1050
taattggagc tccccgcggt ggcggccgcc cgggcaggta cttttttttt tttttttttt 60
tttttttnan gggncnaaaa aaatttnnnt gggggnnnn nggnncnttt ttttttnaaa 120
aantttngnn ccaaannnaa anttttaaa 149

<210> 1051

<211> 91
<212> DNA
<213> Homo sapiens

<400> 1051
acacattgaa atctgcaaca tgctgggact gcagagagcc tgggctggga gtcgtgagct 60
ccaccccggct gtttttatga cagctggcaa a 91

<210> 1052
<211> 84
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 7, 9, 10, 11, 13, 15, 16, 26, 29, 46, 48, 63, 77
<223> n = A,T,C or G

<400> 1052
cccttancnn ngncnnggcc gacgtnctna gctccacaaa cgtggncntg gttggtgcgg 60
aantgattgt gagtgancag gtaa 84

<210> 1053
<211> 43
<212> DNA
<213> Homo sapiens

<400> 1053
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt ttt 43

<210> 1054
<211> 41
<212> DNA
<213> Homo sapiens

<400> 1054
ccctttcgag cggccgcccg ggcaggtact tttttttttt t 41

<210> 1055
<211> 177
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 32, 33, 57, 58, 62, 64, 66, 71, 73, 82, 95, 104, 106,
111, 123, 125, 146, 147, 152
<223> n = A,T,C or G

<400> 1055
tccccgcggt ggcggccgag gtactttcat nnnttttaca cctacctttt tctgggnngg 60
gntntngacc ncnatgatgt gngctctgga aggcntgagc caantntttt ntaaactgac 120
tcnangagaa cgctagggct acaaanngtc tnctgaagat acaaaaccag cgtggct 177

<210> 1056
<211> 500
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 96, 240, 424, 447, 449, 487
<223> n = A,T,C or G

<400> 1056
gccgcccggg caggtacaga gctggaggcc caaacagcca gccaaatctt gctgtatttt 60
atccaccata gtataatcca gagactgtgg accccnaatt gggatgcttt taaaatccaa 120
agtagttctg tatacacatt tgaagaaaaa tgctgttgaa gaaatgtatc cataaaacac 180
ttcaggtcaa aaagcaaaag aatatcaaga aaaagtttaa ataacatgat tcctactggn 240
tttagatcat aattatcatc ctatattatt tatattcgga tcactggtat ctttctctga 300
caaataattc tgaaatacaa tacattttaa agttatgcag gattttaaag acctcgtctt 360
caagcaaata ccagaagttt aataacaaac tttaaataaa tgctcattta aataaaagtt 420
tatntttctc ctggccaaat atttggngna ttcttacaaa gatactttca atgattagat 480
tccttanctt aaaaaaaaaa 500

<210> 1057
<211> 385
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 265
<223> n = A,T,C or G

<400> 1057
cccttagcgt ggtcgcggcc gaggtacagg cggagggggc agaaactgac atcatggagt 60
gtcaggcacg gtgctggtgc tatgcataca ctcaacaagg gcctgggtaa tgcaacatgg 120
agaagggaaa actgggggc agaacaattt tgtcgtctga aagcctttca cagagaggcc 180
ctgaacccat agctctcctt ctctgaggac agaaaaggag gaagtgtgtc tgtcctgcag 240
tatgtgggat ggatagatgg atgcnaaatt aagcactgaa gtgggttgct tggagaggca 300
atgactgccc ctgccctcac ctgaaaatcc ttaaagacag aagggatcat ccgcccagga 360
agctgaggct gcaggataag ctggc 385

<210> 1058
<211> 363
<212> DNA
<213> Homo sapiens

<400> 1058
ccctttcgag cggccgcccg ggcaggtaca accctaccac tactctacat catggaagtc 60
ttaacgattt agggtaatac gataatgaga ataccaatat ggatctatta aatgaggagc 120
tgagtaagct ccaaatttcc ctctagattg gtaagtctat aatttattat atgaaattcc 180
taattattac catactaagt tcaaaagatt ttaacccaaa tcctttagta actgataaac 240
ctcattctta agattcttga cagaaataat cttgatgagc ttcttctctt catgatcttt 300
ccaatgctgt tataattttg agggaattac tcttattttc attaattctg ttgcaaggag 360
gaa 363

<210> 1059
<211> 728
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 159, 237, 325, 351, 361, 418, 436, 450, 470, 476, 499, 526,
528, 536, 539, 542, 554, 556, 560, 562, 577, 584, 589, 596,
604, 608, 616, 619, 623, 630, 632, 634, 635, 643, 645, 647,

652, 668, 673, 683, 688, 692, 693, 699, 700, 702, 703
<223> n = A,T,C or G

<221> misc_feature
<222> 711, 724, 726
<223> n = A,T,C or G

<400> 1059
cccttagcgt ggtcgcggcc gaggtactcc agctatcaaa ggagaatagc ctttaaaaca 60
ccaggatcct ggtcgagatg gtagaggtgg tctgtttgaa tttgggtgaa tagaggaaat 120
gccagttaag ggatagccat tctacagaca aaaatgcanc cgtctatact tttactccgt 180
ggtaatacat tatttgtatt tcttctttct taagcctctt gtctgtttgt cttaagnatt 240
tggcttatgt atttgtcacc tacataaaat atgctcacta aaacgccact gactttaagg 300
aattttaagt atgattatat gtggnccttg tagaaaaacc atctttaaag ngtaaaaaaa 360
naagtttttt taaaaagcta aattagaaac caaaaaagat ctgaaaactc tggaatgnat 420
acatatagaa atgggntttt ttgaggaccn tatgctcctc tttgggatan aaatgngtcg 480
aaaagagcaa atatcttgna aaaatcaact accaagaata ccatcnangt aatgcnatnt 540
cnaagccccgt tcantncaan anaaaaaatt ttggagntaa cccnagccng tggggnccca 600
tccnagantc cctttnttnt ggnaacgggn gnannaaaaa ttncnanaat gnctgtggcc 660
cccccggngt gtngtggggg ggnctccngg gnntggggnn annaccccccc ntgggaattt 720
tttntntt 728

<210> 1060
<211> 320
<212> DNA
<213> Homo sapiens

<400> 1060
actttgctac acggccgggg gccattgaga ctgccatgga agacttgaaa ggtcacgtag 60
ctgagacttc tggagagacc attcaaggct tctggctctt gacaaagata gaccactgga 120
acaatgagaa ggagagaatt ctactggtca cagacaagac tctcttgatc tgcaaatacg 180
acttcatcat gctgagttgt gtgcagctgc agcggattcc tctgagcgct gtctatcgca 240
tctgcctggg caagttcacc ttccctggga tgtccctgga caagagacaa ggagaaggcc 300
ttaggatcta ctgggggagt 320

<210> 1061
<211> 353
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 29, 125, 256
<223> n = A,T,C or G

<400> 1061
ggtacagtag aatctctctg aactgactnt gacagatttt tctttttttcc ccctatagaa 60
gtgccaagaa tgagaaggct attttctaat atgcccacat gtgcatttgt tgcatgtgta 120
tgaanaggga agacagcttc tttgcttagc aaaccactgg ttgtatggga tgtaaaccca 180
tgcttattaa tgtaattaca taatattaca taaactgaca aaatatgaat gtgaaagcta 240
tttcaatgag actaantcaa tgccaactaa ttaaaggtta agtttctaaa agaaaaaaaa 300
ctcactcata ttaggtatgt gtgacagttt taaaagatta aataataaaa ata 353

<210> 1062
<211> 677
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 18, 61, 85, 89, 91, 396, 408, 430, 438, 441, 479, 495, 506,
507, 519, 525, 551, 553, 556, 560, 571, 572, 584, 588, 605,
609, 626, 644
<223> n = A,T,C or G

<400> 1062
gtcgacccac gcgtccgntt acatataatg caacttatat gtaagtttca tcaacacaga 60
ntgagtatat aagttggcta aaagnaggna ntacccatct aacagtacaa tgctgtcaga 120
gacccaggct ctttctggct tattgtaatt catttcctta gcatgttggg ttttatcttc 180
attctgttcc cttcacagtt gtggaattcc tgttgcagct tcattttta aggacacaag 240
gcaggaaagg ggaagggcaa ctccacaccg tgtctgtctt cttatctttg aaattgcaaa 300
gctgtcccag ttaccttacc accctacctt gcttctctag cagatttctc ttccataatt 360
atttaaagcc cacctggggg tcactccagg gtttancaaa agggttancg gttatatttg 420
aaaacctttn gaaaattnca ncccctccca taagtaaaaa gaaaggggcc aagggggang 480
aaaaacgggt gtttntggtt ttaagnncaa ggtcgtaana ttggntcaaa aagggaagaa 540
taagcccaag nantanttcn tcttttttg nnggaggaat aaanccanga ccaccttgtt 600
tgcantttnt aaaaaaccat ggggtnatta aacctttggg gccnttttaa aggggccatt 660
atttttcctt tttaaaa 677

<210> 1063
<211> 465
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23
<223> n = A,T,C or G

<400> 1063
cccttagcgt ggtcgcggcc gangtacccc tttgctgttt gtccccctcc tcccgggtcc 60
tggagtccgt cgtgttccaa cagtttttgc tcttattccc gtgggctgcc tgggcctcct 120
ttcacccgtg agacttggag cggcccctgg ggtcttgggt gtgcagcacg gatcacgcga 180
gacccctgag acctcaaatc atctaacgtg aagccacaga catcttgggc aattttaatc 240
atcaagaaag aaatatgtca ttaagaaata gcagggtatt ttgaaagagt tggaaaacat 300
catgaatttg aatacttcaa gtaatactgg tgatacccaa aggttgaaga atgcctcatt 360
ggatgtaaaa caaatactta aaaatgaaac agagttggat attactgata atctcaggaa 420
gaaactccat tgggctaaaa aagaaaagtt agaaataaca accaa 465

<210> 1064
<211> 362
<212> DNA
<213> Homo sapiens

<400> 1064
ggtacccctt tgctgtttgt ccccctcctc ccgggtcctg gagtccgtcg tgttccaaca 60
gtttttgctc ttattcccgt gggctgcctg ggcctccttt cacccgtgag acttggagcg 120
gcccctgggg tcttgggtgt gcagcacgga tcacgcgaga cccctgagac ctcaaatcat 180
ctaacgtgaa gccacagaca tcttgggcaa ttttaatcat caagaaagaa atatgtcatt 240
aaaaaatagc agggtatttt gaaagagttg gaaaacatca tgaatttgaa tacttcaagt 300
aatactggtg atacccaaaa ggttgaagaa tgcctcattg gatgtaaaac aaatacttaa 360
aa 362

<210> 1065
<211> 247
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4
<223> n = A,T,C or G

<400> 1065
aganacttga acaattggtt tatttctaaa aagggtgaca tttataagta ttcatgcagc 60
atttgagtcc ctattggtga gtgagcagac tatccaatac tcattggccc tctggcacaa 120
caaaattaaa acaaataaac aaaaatccgt gactacctag ggttgctagg attgcttaag 180
aagagtctaa agttctgtta tacatgtgaa cgcagaggac ccacatgccg agctattgtt 240
tctttgg 247

<210> 1066
<211> 412
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 201, 203, 204, 307, 308, 311, 312, 319, 320, 348
<223> n = A,T,C or G

<400> 1066
tttgtcttcc atccctaatc cttgatcaat ccaatcattc attttgtctc ttcttacaca 60
gcctgtagaa agaaaaagac tgcataacac tgaagaagtg tggttacaaa gttacgactt 120
cctggctggg cgcagtagct cacgcctgta atcccagcac tttgggaggc tgaggcaggc 180
ggatcacgag gtcaggagat ngnnaccatc ctggctaacg gggtggaacc ccgtctctac 240
taaaaataca aaaaattagc tgggtgtggt ggcgggtgcc tgtggtccca gctacttggg 300
aggctgnngc nngagaatnn cgtgaaccgg ggaggcggag cttgcagnga gccgagatcg 360
tgccactgca ctccagcctg ggtgacagag cgagactctg tctcaaaaaa ga 412

<210> 1067
<211> 466
<212> DNA
<213> Homo sapiens

<400> 1067
cccttagcgt ggtcgcggcc gaggtactcc agctatcaaa ggagaatagc ctttaaaaca 60
ccaggatcct ggtcgagatg gtagaggtgg tctgtttgaa tttgggtgaa tagaggaaat 120
gccagttaag ggatagccat tctacagaca aaaatgcagc cgtctatact tttactccgt 180
ggtaatacat tatttgtatt tcttctttct taagcctctt gtctgtttgt cttaggtatt 240
tgtcttatgt atttgtcacc tacataaaat atgctcacta aaacgccact gactttaagg 300
aattttaagt atgattatat gtggtccttg tagaaaaacc atctttaaag tgtaaaaaaa 360
gaagtttttt taaaagctaa attagaaaca aaaaagatct gaaaactctg gaatgtatac 420
atatagaaat ggttttttga ggaccatatg ctcctctttg taatac 466

<210> 1068
<211> 374
<212> DNA
<213> Homo sapiens

<400> 1068
cccttagcgt ggtcgcggcc gaggtactcc agctatcaaa ggagaatagc ctttaaaaca 60
ccaggatcct ggtcgagatg gtagaggtgg tctgtttgaa tttgggtgaa tagaggaaat 120
gccagttaag ggatagccat tctacagaca aaaatgcagc cgtctatact tttactccgt 180
ggtaatacat tatttgtatt tcttctttct taagcctctt gtctgtttgt cttaggtatt 240
tgtcttatgt atttgtcacc tacataaaat atgctcacta aaacgccact gactttaagg 300
aattttaagt atgattatat gtggccttgt agaaaaacca tctttaaagt gtaaaaaaag 360
aagttttttt aaaa 374

<210> 1069
<211> 288
<212> DNA
<213> Homo sapiens

<400> 1069
ggtactccct ctcccctccc tatctcagga atgaagcttc tgtgtctgct acaagcctcc 60
aatgccacaa tgcaagctgt tgagggggct cttcttcaac acctatgggc ctgaaagatt 120
ccagccaccc aagatcttca gccctgaggt tggaaactga cctgggggcc tcagcttgct 180
gtgactgtca ctgcccatgt gttcttcccc atgcctcacc ttcctcctcc aagtgcgtga 240
aacatcaatg aaccttgtgc ttttgtcgtg tgatctgtac accccatc 288

<210> 1070
<211> 274
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23
<223> n = A,T,C or G

<400> 1070
cccttagcgt ggtcgcggcc gangtactaa catcaataag tcgagaaaat tatattaact 60
gaaagaaaac aaaataatag agaattttat taaacgtatt tctaatgttt ctcttcatgt 120
ttggagaaaa gctgccacat aattaaaaca attcttaccc tgtaaaactg attgtcttcc 180
aatctcagga ggtttacatt aacaggaata tagaataaga aacaggccta tggccgagct 240
ccgtggctca cgcctgtaat cccaacactt tggg 274

<210> 1071
<211> 518
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 172, 194, 204, 206, 222, 248, 445
<223> n = A,T,C or G

<400> 1071
cccttgcact gtgacaagct gcacctgacg ctcatcctgc tccattattg cctgaccact 60
aagctgaaaa acggtgtaaa accaggcatc gtcgctgcct tttacttcct gccaggtgcg 120
ggataaattc accccgctgg ttgtcacggt actcagcttt agtcctttgg cnaaatgcgt 180
gtccagtaca cccntgtaac gctnantcag caggcgtccg gnaaaatttc cgcatacctg 240
attgattngg gaaagccatt gctgaaactc attatccact gcggggttca tggcacgttt 300
tcgctctgtg aaatgtattt ttattgttgc atttgtgttg caataaacga agctaatgag 360
cctgactata ggaaataagt cttgtcaggc atagagacat aagcggttat tgtcacgatt 420
tgcggagctt gtcacagctg acaanagcga atgtcacagc gaaaaaagtg acttttcttg 480
tcgctgcgta cactgaaatc acactgggta aataataa 518

<210> 1072
<211> 516
<212> DNA
<213> Homo sapiens

<400> 1072
cccttgcact gtgacaagct gcacctgacg ctcatcctgc tccattattg cctgaccact 60
aagctgaaaa acggtgtaaa accaggcatc gtcgctgcct tttacttcct gccaggtgcg 120

ggataaattc accccgctgg ttgtcacggt actcagcttt agtcctttgg caaaatgcgt 180
gtccagtaca cccgtgtaac gctcagtcag caggcgtccg gtaaaatttc cgcatacctg 240
attgatttgg gaaagccatt gctgaaactc attatccact gcggggttca tggcacgttt 300
tcgctctgtg gaatgtattt ttattgttgc atttgtgttg caataaacga agctaatgag 360
cctgactata ggaaataagt cttgtcaggc atagagacat aagcggttat tgtcaccgaa 420
ttgcggagct tgtcacagct gacaaagcga atgtcacagc gaaaaaagtg actcttcttg 480
tcgctgcgta cactgaaatc acactgggta aataat 516

<210> 1073
<211> 235
<212> DNA
<213> Homo sapiens

<400> 1073
cccttgcact gtgacaagct gcacatccat atcgccatca acaagattca cccgacccga 60
aacaccatcc atgagccgta tcgggcctac cgcgccctcg ctgacctctg cgcgacgctc 120
gaacgggact acgggcttga gcgtgacaat cacgaaacgc ggcagcgcgt ttccgagaac 180
cgcgcgaacg acatggagcg gcacgcgggc gtggaaagcc tggtcggctg gatct 235

<210> 1074
<211> 346
<212> DNA
<213> Homo sapiens

<400> 1074
cacattctac tctaccattc ctttgcccat tttaattttt ttaagacaca gatatcctta 60
aaacttttta tcagttcttc atcagattta ggatgcagtt agatttttct ctcactccat 120
acaccaacaa taattgtaaa taaattagaa atttaaatgt aaagcaagaa atcatgtaag 180
tcccagccaa aaatttgaat aaatatgtaa tctttgtgtg aagaaaactt tttaaaaaca 240
gcaacaaaga cagactatta aggaatgtaa actgaggaaa atatttgcaa tatatggcag 300
gcaaaaagtt agtagattta acatagaatt ttatttttgt taggat 346

<210> 1075
<211> 439
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 391
<223> n = A,T,C or G

<400> 1075
cccttgcact gtgacaagct gcacaacaga gtgatttgat taacgtcgcc caactgacgg 60
cgcaatatta tgtactgaaa ccagaagcag ggaatgcgga gcacgcggtg aaattcggta 120
cttccggtca ccgtggcagt gcagcgcgcc acagctttaa cgagccgcac attctggcga 180
tcgctcaggc aattgctgaa gaacgtgcga aaaacggcat cactggccct tgctatgtgg 240
gtaaagatac tcacgccctg tccgaacctg cattcatttc agttctggaa gtgctggcag 300
ccgaacggcg ttgatgtcat tgtgcaggaa aacaatggct ttaccccgac gcctgccatt 360
tccaatgcca tcctggttca caataaaaaa ngtggcccgc tggcagacgg tatcgtgatt 420
acaccgtccc ataacccgc 439

<210> 1076
<211> 338
<212> DNA
<213> Homo sapiens

<400> 1076
acgcgggaca cattcagagg tgagcccaga gcgggtaaag tggactgggg agaacttcgg 60

aggatgttca tgtccaggag cagccccacg ccctgtatgg tcggtgtcta gagcctcaca 120
gcaactaaga ccaacccagc tctcagaaga aggaatgtca aaatgtcatg ttcaatttta 180
cattcagtgc ctggaatctt ttcttcacaa ttgaaatgaa atgtgctgaa ggaggtgaat 240
ccatgcatta atcttcagct cacaaaggaa atactacata agaagcaaga ccacagactc 300
aagacggaca taattggatt tttttgcca tggcctgg 338

<210> 1077
<211> 399
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 360
<223> n = A,T,C or G

<400> 1077
ccctttcgag cggccgcccg ggcaggtaca cacagttaac cacaaaacag gcctctctga 60
aaaagccatt gccatggact gccagacaga caatgacaag acacagaata ccttctggtg 120
tgtgagccac gggacatgtg agcttccccg ctgatgctcc tcttatatca aagatcactt 180
tcacaagatg agcgactcaa tatcttttat caaaccaatg atcacctgca agctatggta 240
tatttttgca gctgtgtaga gctatgtggc atgagaatgt gggacttata aattgctgat 300
ccaataaata gacattatgg gcaacagtgt cttatcagct agtgtgtact aaggtttcan 360
gaacagttgt tctgacctta ctatccaacg aggagtaac 399

<210> 1078
<211> 685
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 30, 42, 44, 51, 93, 96, 122, 207, 235, 237, 242, 281,
283, 287, 331, 342, 359, 412, 456, 462, 475, 478, 491, 492,
508, 511, 537, 548, 554, 680
<223> n = A,T,C or G

<400> 1078
tttcggaggc cgggntcggc cctgtgtgcn atgtgttacc cntntcacca nattaccatt 60
ttgggccaag attctgaaaa gcctactaaa gcnacnacag taggacccaa ggaaataagc 120
cnatagttat gtaaaaaagg ccttattgta aaacaaaccc atttttttta aggggagaag 180
ccttaggtat tttaagcaag tttccanaag gacccccaag gccatgtttg gaagngnacc 240
anaagaaagg ggcctttctt tgtggtggaa ccttggtcct ngngggngga attttttcca 300
atctctgggg aaaaaggttc cttggggaag naattttggg gnggcccctt ttttttaana 360
agaaaaaggg gggaaccaaa aaaaacctta aaaggggggt taaaaggttg gnaaaacctt 420
ttttgggggt tttcctttaa ggggaaaaat tggggnccaa anggaaattc catgntcnaa 480
aaggaaaaag nnaattccac ccccagtngt nggcccccaa aacctttggt ttaaggnccc 540
cttttttnac caanccaaaa ttgggttcca atttaaggcc caaggccccc caaaaaattt 600
tccaaggttc caaggcctta attttgggaa aattttaaaa aagcctcttt taattttggg 660
gtcccttaaa ccttttggn cccca 685

<210> 1079
<211> 577
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 245, 280, 288, 297, 337, 340, 352, 360, 403, 406, 409, 420,

436, 440, 461, 470, 477, 481, 489, 516, 518, 544, 546, 559
<223> n = A,T,C or G

<400> 1079
ccctttcgag cggccgcccg ggcaggtacg cgggacacat tcagaggtga gcccagagcg 60
ggtaaagtgg actgggggaga acttcggagg atgttcatgt ccaggagcag ccccacgccc 120
tgtatggtcg gtgtctagag cctcacagca actaagacca acccagctct caggaagaag 180
gaaatgtcaa aatgtcatgt tcaattttac attcagttgc cttggaatct tttcttcaca 240
attgnaaatg gaaatgtggc tgcaagggga ggttgaaatn ccattgcnat taagtcnttc 300
aagctcacaa agggaaatta cctaccataa agaaagncan aggacccaca gnactccaan 360
gaccgggacc attaaaattt gggattttgt ttttttgcc cantgngcnc ctggggaaan 420
agaaaaaggg ttaacncttn cgggcccggc ggacccaccg nccttaaagn gggccgnaaa 480
ntttcccang gccaccacct tgggcccggg gcccgntnta accttaagat ggggaatccc 540
cgangncttc cgggtttanc ccaaagggct ttggggg 577

<210> 1080
<211> 341
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 59, 77, 111, 139, 282
<223> n = A,T,C or G

<400> 1080
cgcggggaca cattcanagg tgagcccaga gggggtaaag tggactgggg agaacttcng 60
aggatgttca tgtccangag cagccccacg ccctgtatgg tcggtgtcta nagcctcaca 120
gcaactaaga ccaacccanc tctcagaaga aggaatgtca aaatgtcatg ttcaatttta 180
cattcagtgc ctggaatctt ttcttcacaa ttgaaatgaa atgtgctgaa ggaggtgaat 240
ccatgcatta atcttcagct cacaaaggaa atactacata anaagcaaga ccacagactc 300
aagacggaca taattggatt tttttgcca tggcctggaa a 341

<210> 1081
<211> 350
<212> DNA
<213> Homo sapiens

<400> 1081
acctttcttt ccaggccatg gcaaaaaaaa tccaattatg tccgtcttga gtctgtggtc 60
ttgcttctta tgtagtattt cctttgtgag ctgaagatta atgcatggat tcacctcctt 120
cagcacattt catttcaatt gtgaagaaaa gattccaggc actgaatgta aaattgaaca 180
tgacattttg acattccttc ttctgagagc tgggttggtc ttagttgctg tgaggctcta 240
gacaccgacc atacagggcg tggggctgct cctggacatg aacatcctcc gaagttctcc 300
ccagtccact ttacccgctc tgggctcacc tctgaatgtc cccgcgtacc 350

<210> 1082
<211> 348
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 123, 163
<223> n = A,T,C or G

<400> 1082
ccctttcgag cggccgcccg ggcaggtacc tttctttcca ggccatggca aaaaaaatcc 60
aattatgtcc gtcttgagtc tgtggtcttg cttcttatgt agtatttcct ttgtgagctg 120

aanattaatg catggattca cctccttcag cacatttcat ttnaattgtg aagaaaagat 180
tccaggcact gaatgtaaaa ttgaacatga cattttgaca ttccttcttc tgagagctgg 240
gttggtctta gttgctgtga ggctctagac accgaccata cagggcgtgg ggctgctcct 300
ggacatgaac atcctccgaa gttctcccca gtccacttta cccgctct 348

<210> 1083
<211> 336
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 22, 25, 32, 34, 60, 66, 67, 68, 70, 77, 80, 98, 111,
121, 130, 166, 179, 195, 201, 244, 272, 277, 291, 294
<223> n = A,T,C or G

<400> 1083
ccctttccag cggccgcccn gncangtacg cngngagagg gggtaaagtg gactggggan 60
aacttnnnan gatgttnatn tccaagaaca gccccacncc ctgtatggtc ngcgtctata 120
nccttcagcn actaaaacca acccatctct cagaaaaagg aatgtnaaaa tgtcatgtnc 180
aattttacat tcagngcctg naatcttttc ttcacaattg aaatgaaatg tgctgaagga 240
ggtnaatcca tgcattaatc ttcagcttac anagganatc tacataagaa ncangaccca 300
gactcaagac tggacataat tggatttttt ttgcca 336

<210> 1084
<211> 530
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 490
<223> n = A,T,C or G

<400> 1084
tgcacttcaa gaatgccgcc agacagatag ataaactctt cgtgaccgtg ctgtttcacg 60
atgcgaatca taccaggctt aatggcggtg agcagcggtg cgtggccagg gtagatcccc 120
agttcacctt cgctacccgt tacctggatt ttctcgacca gaccagagaa catttgttgc 180
tctgcgctga cgacgtccag gtggtaagtc attgccatat caccctccga ttaaggcgtt 240
aaagtttttt ggctttttcc acagcttctt cgatggaacc gaccatgtag aacgcctgct 300
ccggcaggtg atcgtattcg ccttccatga tgcctttaaa gccacggatg gtgtctttca 360
gggagacgta tttacccgga gaaccggtga atacttctgc cacgaagaac ggctgggaca 420
ggaagcgctg gatcttacga gcacgcgcta ccaccagttt gtcttcttca gacagttcat 480
ccatacccan gatggcgatg atgtctttca attcctgata accgttgcag 530

<210> 1085
<211> 359
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 60, 107, 302
<223> n = A,T,C or G

<400> 1085
ggtactcggg gacattcata ggtgagccca gagcgggtaa agtggactgg gganaacttn 60
ggaggatgtt catgtccagg agcagcccca cgccctgtat ggtcggngtc tagagcctca 120
cagcaactaa gaccaaccca gctctcagaa gaaggaatgt caaaatgtca tgttcaattt 180

tacattcagt gcctggaatc ttttcttcac aattgaaatg aaatgtgctg aaggaggtga 240
atccatgcat taatcttcag ctcacaaagg aaatactaca taagaagcaa gaccacagac 300
tnaagacgga cataattgga tttttttgc catggcctgg aaagaaaggt acctgcccg 359

<210> 1086
<211> 360
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 35, 42, 110, 284
<223> n = A,T,C or G

<400> 1086
cccttagcgt ggtcgcggcc gaggtactgg cacanactgc ancccttggtg actctcccaa 60
acacaggaca ctgtaggatg aaaccagagt gtgtgatctc cagtcactan acattgctga 120
gggtttaaaa gcctgcctgc ttgtgaatat ccttccggtc tttttccctt aagggcaaag 180
catcatccat tcctatttgg aagtgaggct tgagtttcac cttgaaaatg cagcaatttg 240
caccgctatg ctgtatgcct cttatatact acatttatga ttgncagaat ttaatcctat 300
agaatgctaa agaaccaacc tgcaaaaggt cttgtctata ccctcctctc ccccacctca 360

<210> 1087
<211> 370
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 20, 24, 27
<223> n = A,T,C or G

<400> 1087
ccctttccag cggccgcccn ggcnggnaca cactagctga taagacactg ttgcccataa 60
tgtctattta ttggatcagc aatttataag tcccacattc tcatgccaca tagctctaca 120
cagctgcaaa aatataccat agcttgcagg tgatcattgg tttgataaaa gatattgagt 180
cgctcatctt gtgaaagtga tctttgatat aagaggagca tcagcgggga agctcacatg 240
tcccgtggct cacacaccag aaggtatttg tgtcttgtca ttgtctgtct ggcagtccat 300
ggcaatggct ttttcagaga ggcctgtttt gtggttaact gtgtgtacct cggccggacc 360
acgctaaggg 370

<210> 1088
<211> 468
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 39, 124, 188, 213, 257, 330, 339, 366, 370, 373, 399,
405, 413, 419, 440, 442, 454, 458, 463, 464
<223> n = A,T,C or G

<400> 1088
naggtactgg tctgcctgaa ggctgagggc agtaaaatna ttgacattac tataatactg 60
acctcaatcg agctaacctt taaattctga gaaacaggtt ttcaaacagg tttataggcc 120
aaanagagtc tggaacaccc taagggcttg gttttcctgg ccaagtaatc agtcaaagct 180
attactgnca ctctgccttt tccttgtggc tanataacac agcccaagtg cagttgccaa 240
tttctaatga atactangtg tggcctccat tttatcctgt gcaaggggat attggaaatc 300

tttgttcgaa gcaatatcca cgagagaggn ggcttcatnc ctcaaaagtt aaggtggatt 360
ttaaancaan ttnggctgct ttttaaccaa aattacagna tgggntattg gangggccna 420
ataaaatatt taataaggan gnctaaataa atgnttgnaa aannttttt 468

<210> 1089
<211> 399
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 325, 379
<223> n = A,T,C or G

<400> 1089
ggtacttatg gtgtgatgcc ctcaatctgg gatttgctaa gacatgcagc aggacaagtc 60
catcccacgg catctaagac atccatggga aatgccctga ggtcttactt tttgcatttg 120
ttttagcaga acagaaactg ggaggaggga gttaaaagag ctgatggaat ccttttctca 180
gcttctccaa atctctgaga aaataattta tttcacatca aatattggaa gtgaaaactc 240
aatggacaaa aaacaaacaa aaaaatacat gatgtccatc aaaatgttga cctcttcaag 300
gcatgaaata aaagggagca aagcnggtaa tattaatata ccagaaaagc cagtaagttt 360
tgttttaccg tttatgaana cctactacct cctgttttc 399

<210> 1090
<211> 403
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 270, 273, 281, 304, 349, 352, 364
<223> n = A,T,C or G

<400> 1090
ncccttagcg tggtcgcggc cgaggtacct ctcatttgcc acttttcaac acttcctggc 60
aggcaggcag cataactggt cctgctgggt gatccagacc acactctgca actctttctt 120
ctgagccagg ctcccctact gtcttttcat ttatgtcaag gcaggggaag acctcaaagg 180
gctcttgcat cccagtctca cttcccagag aggcacgagg ccctccagga tgtggggaca 240
ggaactttgg ggcaagccgg ggttgtccan aanaatacca ngagggctga atagtagaaa 300
gganaagtct tattggtgat atgtttgcaa actgggaaaa gatagcctnc antgtggagc 360
aaanatgctc cttcttcaaa aagggcaagg gcagcttgga ttt 403

<210> 1091
<211> 278
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 239
<223> n = A,T,C or G

<400> 1091
cccttagcgt ggtcgcggcc gaggtactcc ctctcccctc cctatctcag gaatgaagct 60
tctgtgtctg ctacaagcct ccaatgccac aatgcaagct gttgaggggg ctcttcttca 120
acacctatgg gcctgaaaga ttccagccac ccaagatctt cagccctgag gttggaaact 180
gacctggggg cctcagcttg ctgtgactgt cactgcccat gtgttcttcc ccatgcctnc 240
cttcctcctc caagtgcgtg aaacatcaat gaaccttg 278

<210> 1092
<211> 343
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 299, 334
<223> n = A,T,C or G

<400> 1092
ccccttagcgt ggtcgcggcc gaggtacgcg ggcaaactca ttagcaaagc acacaaagac 60
ctttgtgatg tggtattgct gaattaaact actggcagcc ctagaaaggt aaagtgtatt 120
tgatgcttct gtgctgttcc cttagcccag aaagcccttc cagtttctgt ttagtaaagt 180
cctattcatc tttcactact caatgagtca taagtaatcc cattaggaaa gcctgtgtga 240
tctacctcct ccctaatttg ccagcttgag tttgcttcac cccttcataa tactcaagnc 300
aatcataatg tcttataatc catcatagca cctnacacaa tga 343

<210> 1093
<211> 392
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 290
<223> n = A,T,C or G

<400> 1093
ccccttagcgt ggtcgcggcc gaggactgac tgctactggt agacctaggg tcagctttga 60
ggactgaggt aaccaccaca ggaaataagt tttgaggtct gattttgaaa caatattgga 120
agaccattcc tttgtgagat agaaacttct ccattttaat tttagtattt taagcttttc 180
ctacaggtca gttgggaata atttttattt agggactcac aatcttgaat ttttagctaa 240
atgccttaag aataaaatat tatttaaaaa gtattaaaat gctgtgattn caaacagttt 300
cttgttcaag atgaagaata taaaaatata ccaccatgtc tcggcaactg gaaaagcaga 360
ttttaatttt cattccaaaa atgggagact ga 392

<210> 1094
<211> 295
<212> DNA
<213> Homo sapiens

<400> 1094
ccccttagcgt ggtcgcggcc gaggtacttt gctacacggc cggggggccat tgagactgcc 60
atggaagact tgaaaggtca cgtagctgag acttctggag agaccattca aggcttctgg 120
ctcttgacaa agatagacca ctggaacaat gagaaggaga gaattctact ggtcacagac 180
aagactctct tgatctgcaa atacgacttc atcatgctga gttgtgtgca gctgcagcgg 240
attcctctga gcgctgtcta tcgcatctgc ctgggcaagt tcacctttcc tggga 295

<210> 1095
<211> 376
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 143
<223> n = A,T,C or G

<400> 1095
ccccttgagcg gccgcccggg caggtactga ttaattactg cagtaacctg gcaaagagat 60
ctctcaaaag ccctgcagca tcaaggtttt tatgaatggc ttagatgagg tggatacagc 120
attcctgact tgtcgagtct tanaaacaca aagctactgc tacaagagtg gccatggggt 180
cccaaaagag tctttacaca cattacaaaa ggctaaatct aaaaggattc aacataataa 240
ggtaagtgga agttccgcct ggaactccca gaaatttagt tgctcacaaa aaagccaaag 300
gccaattcag tcttaatctg atacactaga agcacagggt caaaacagga tgatcttccc 360
tgtcgcttat cccccg 376

<210> 1096
<211> 359
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 124, 290, 304
<223> n = A,T,C or G

<400> 1096
ncccttcga gcggccgccc gggcaggtac ttctgggtct aattaccaaa ttggtcccag 60
ggcagagaac tctctctcct gcattgcagg ggatgcctag gcagtgtgta ggcctaagcc 120
tganaactac ccaggccttc ccatactttg gaagcagttg acacttgact tcttggtttc 180
catctttgca ctgtgctgtg tagccctgtg tgtaaacagc aggcactcat gtgccattga 240
ctcagggtca gaagcaccac agcattgact gtgtgctctc tgactgaggn gggaactgcg 300
gcancactgg gtaacaggtt ggactgaagt tggtctcatt tggagagtgg ggagcaagg 359

<210> 1097
<211> 393
<212> DNA
<213> Homo sapiens

<400> 1097
cccttagcgt ggtcgcggcc gaggtacgcg gggagagaac tcatgagttt tccgcttcat 60
cgtctgcttc tgttttctcc atcttagttt gcccaaagct tgctggccgc tgtgtagggc 120
tggtgagtgg ctggggctgt ctgagccatg aacaacttca gggccaccat cctcttctgg 180
gcagcggcag catgggctaa atcaggcaag ccttcgggag agatggacga agttggagtt 240
caaaaatgca agaatgcctt gaaactacct gtcctggaag tcctacctgg agggggctgg 300
gacaatctgc ggaatgtgga catgggacga gttatggaat tgacttactc caactgcagg 360
acaacagagg atggacagta tatcatccct gat 393

<210> 1098
<211> 361
<212> DNA
<213> Homo sapiens

<400> 1098
ccctttcgag cggccgcccg ggcaggtacc aagtgtcccc aaaccaccaa attctgaatg 60
ccctgagctg gctgaatgca gaccaaagac tgggtgactg accattggga aggcactcga 120
cactgtggac aggttaaacg gttgatcccc agctgttctg aataaatgtc cacatgggtt 180
gattgtagag ctaagtgaag caactccagt ggaaaggcca ccttttgaaa ctactgaagc 240
cacagaaggt gtcgaagatg aagttggtgt agtagaggag gctgctgagg atggtaaccg 300
ttctccagac tccatattgt gatcaatgtg gtcaatcttg tgacatcact tgttgggaaa 360
c 361

<210> 1099
<211> 360
<212> DNA
<213> Homo sapiens

<400> 1099
actaacatca ataagtcgag aaaattatat taactgaaag aaaacaaaat aatagagaat 60
tttattaaac gtatttctaa tgtttctctt catgtttgga gaaaagctgc cacataatta 120
aaacaattct taccctgtaa aactgattgt cttccaatct caggaggttt acattaacag 180
gaatatagaa taagaaacag gcctatggcc gggctccgtg gctcacgcct gtaatcccaa 240
cactttggga tgccgaggcg gacggatcac gaggtcagga aatccagacc atcctggcta 300
acgcggtaaa acctagtctc tactaaaaat acgaaaaaaa aaaaggaagg aaggaaaaaa 360

<210> 1100
<211> 525
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 409, 486
<223> n = A,T,C or G

<400> 1100
acacgtggaa gttaccccag tgcctcccac tttagactac aggtcataac tcggtgtggg 60
agtagagcca ttccacccat ggccaggaaa gctgtgccca gttacaagtc ctgtgacgcc 120
ttaacatagg aatagttctg tttttcaaac aagttgtcga gaagttacca agaaaataaa 180
gaaccttctt cccacagaag aaggcagcca gaatacccaa gtcctagaaa acactatatt 240
gcaaaattag aacaaataat aagatgtctt ggccgggcgc ggtggctcat gactgtaatc 300
ccagcacttt gggaggccaa gctgggtgga tcacctgaga ctgggagttc gagagcagcc 360
tgactaacgt ggagaaaccc catctctact aaaaatacaa aactagccng gcatggtggc 420
gcacgcctat aatcccagct actcagggag gctgaagcag aaaaatcact tgaacttggg 480
aggcanaagt ttgtggtgag ctgaaatcgt gccatttgcg ctcca 525

<210> 1101
<211> 224
<212> DNA
<213> Homo sapiens

<400> 1101
cccttagcgt ggtcgcggcc gaggtacctg caaaggcact gaggtgggag ggagcatgcc 60
aatgtaggga aatgaagaaa cccagtgtgt atgagccaag ctgaataaaa catgagaaga 120
agctggagaa tgagagagac cagtccccaa gctctcaagg agcaagagga agccttttcg 180
gcatttgaag tggagggatg gcatgatctc gtgcgtagtt ttta 224

<210> 1102
<211> 401
<212> DNA
<213> Homo sapiens

<400> 1102
ccctttcgag cggccgcccg ggcaggtacg cgggtctttt aactgttatg gatgtataag 60
cactatctat gatggacgag gcatagtgca tctcctaggc cggaaatgtt tcactcacta 120
atgagctgga caattctact ctgtgaattt aactttcctg actcccatat gcaggttaat 180
tttggtaaca tatcatattt tactctggct tggtgggatt aggtgggaaa ttacagattg 240
catcaacaat ttggtctgcc tggatacaat ttggtctgtt tcaatcacag cctgggtcac 300
acctgttgat atatattttt aaactgattc ctctctagat cattctttct gatcagcaca 360
aggcaatatg ctgaaatttc tcttttatat ctgttttatt a 401

<210> 1103
<211> 371
<212> DNA

<213> Homo sapiens

<400> 1103
acgcggggag gctgtaggtg ggctccgctg ggtaaaagtt gccgcagcag ctgtcccttg 60
gccccatcgc gatttatttt tccccttgc tttccgggtc ccgggatccc aagtttgtaa 120
ctaacgggag cgaatccaca cccgagcaaa atgtttgcga gtttcaggcg cccttagttg 180
aaaggttgta attaacaagt ccgctgtttg ccagccaggc gccgttgcag gcgctttctg 240
tggattgtca tttatttctt acaagcaccc taggaggctg ttatccttga catctgcagc 300
agcccttcca agctgtggag accaggtcat ctggaatgcc catttatgtc aatggaagaa 360
agaaaaaggg g 371

<210> 1104
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 146, 150, 346
<223> n = A,T,C or G

<400> 1104
ccctttcgag cggccgcccg ggcaggtaca gctgcttggc cagggtccct ggctctgcct 60
acgtcatctg ggtgtgtagc tataataaca aaaatggcaa aaaggatatt aagtggccat 120
acctttctat caaggaaagc tacccnctgn cacagactca tgataccttt aggattgaag 180
attcgcacat cctggattta gcctgtgtgc catcaatgtt ctgtttattg gaaggaaaga 240
aattgatttc ctgtttcctt agttcattca tctattaata aacatttttt aggcacccta 300
caggtcccag atactatgct atgcaggcag caaaaacaca aataanacat aatccctgca 360
ctgagggtct actggggtag tgtagcaggg gtggtaggca a 401

<210> 1105
<211> 397
<212> DNA
<213> Homo sapiens

<400> 1105
cccttagcgt ggtcgcggcc gaggtacagg tagggttcat ttgcattcct gcaggtatcc 60
cagagggagg gttctggagg aactttgagc tgtctagatt acccgatgaa aacttgttct 120
tttatcaacg gccacttccg gagctcgcgc aggggccgct cactagacca ctgctccctg 180
cccgtgtgcc ccagttcaga gtaatctgta ttcttcacag tcccttcttc cagtgaaagc 240
atctctttta cctttcacca agccttacct ctaaaaggcc agtgatacct tagacatttc 300
agaaagctca aaatgatgac tcaaaactat aataagcaac gtgcctgtcc ctttactttt 360
gttcccctgg gagttatcaa ttggtcgtct tgaaatg 397

<210> 1106
<211> 407
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 106
<223> n = A,T,C or G

<400> 1106
cccttagcgt ggtcgcggcc gaggtactga tataggctga cctagaggaa tgtattttat 60
gaggccattt gtttttgtt atgatgcttt caatcccttt tacaantaac tttttaaagt 120
ttcccctgaa acaagatgag gggacccatt tctcttaagg agcacagcac actgaaaggc 180
tgtcagtggc cagacgaccc agccacacag aaaggcaccc acagcagctg ctttgtctta 240

aagggaaaaa tactggcaga tccaggagct gagaaaaata tcaaacgagg aagtatgact 300
gccatttata tcttccccat gactatgtga ctaggatact cagcattttt cctaccaagg 360
taatggcaat ggggcaggag taaggtcaca gggaagctaa agaggga 407

<210> 1107
<211> 410
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 94
<223> n = A,T,C or G

<400> 1107
cccttncgag cggccgcccg ggcaggtact ttcttaaaat taataaaaac ttatcagtaa 60
acaatttcta ttccatcaga aagtgagaaa gctnaaagat aaatcagtaa aatgatacta 120
gaaaaacaat tatggctctc tgtggttccc cgatgagact tacaataata gtgctttagg 180
atttagcatt aaaattagat atattagtgt tttattcatc tctaagacag aatagttagt 240
aatacttatt ctgccttcta cacaatatgg tggtgataaa attaaatcat gaataagaaa 300
ataagacaac ttttatcaac tatagattta taaacagtga cagcaatcct aaatgataag 360
ccattctggc cataactctg tattttactc cttcttttgg aagactgaaa 410

<210> 1108
<211> 415
<212> DNA
<213> Homo sapiens

<400> 1108
cccttagcgt ggtcgcggcc gaggtacact ggaggtaggg agctcaggga tggcagctca 60
gatccggaac aattacaatt caatacttgg gcatcagcac tctaaatccc gaggagctag 120
ccaggagtga agtgaggaaa gagcaaatca atttaaacat tgctaaatac caaagacaag 180
ctagctattt cttactttgc atgaggcttg cccacgtcct ttcttgtaaa ttgtctggac 240
catctctggt catttggtgg catcagcagg acagagatat agtgagatgc agagagccat 300
cgaagttgtc tgacttggtg gaaacaaatg tgacttggct tggagtgtca aagcaagaat 360
gagtgcgtgc atcagatgga agttgtccat ggggtcttgc agacatgcat cgttg 415

<210> 1109
<211> 379
<212> DNA
<213> Homo sapiens

<400> 1109
acactgttct atattttagc agggaaggaa tttgtgtatg tgtgtgctaa ctagaaacaa 60
tgagaaatag ctctaatgaa agttatatgg tcagaatttg gctacaagct ctgcatcatt 120
agtaaagcgg agtattattg gcagatgtca tgctactttc caaaaagcct gaacccatcc 180
tgatttctcc tttcttagtt gaaatgccaa caattgcata tttgcttaat tattgctttt 240
taaaatattg gctctgtata agcaagggaa agtaatagaa aaagtattgt tcttccaagt 300
aaagcagaac acaccaagtg gacaatagca gcttatattt tcactcaaca tgggatacta 360
tttttaataa ggatgtttt 379

<210> 1110
<211> 402
<212> DNA
<213> Homo sapiens

<400> 1110
ccctttcgag cggccgcccg ggcaggtact gaactgggag gtttttagtc tgatagccac 60
aattttgacc taggcaggaa gctttacagc ttgaggcagt ttcatggtct gaagacaaac 120

ttcttgtgac ttgctgccgg tgttggactg caggagagag cctcactggg tcaggagcac 180
gagaacaaag tggatcccac taccacatcc cacccctcct gtttcagagg cagatcatgg 240
gaccaggact actgagagtt ccatggccct acccatcatc tgaaatgccc aagaacttct 300
ccgattaaca aaggtcaagc ataaactcta ttgccaccac cacagctggt tctcactttt 360
aggtgctacc tcctgtccta aaggttgatc tacacagtcc ct 402

<210> 1111
<211> 206
<212> DNA
<213> Homo sapiens

<400> 1111
actggcagca accaccactg gatgaaggtg cttattgcat ctcattcttt ggatctcatt 60
tttacccata ggcctctggg gcaccatatt aaaattccag aggccattcc tggccttgtt 120
tcatacctta tgggaaatga cgcaggttat atggtatgga tctataggtg taaagactgg 180
gtagcaatgg ctggattggc cgtacc 206

<210> 1112
<211> 424
<212> DNA
<213> Homo sapiens

<400> 1112
cccttagcgt ggtcgcggcc gaggtacaac gttagcagca attcaaaagg gcatcggaga 60
caactaatca tttcataatg agcgagggga gaagcaataa aagccgggag cccaaggacg 120
gcatgataat tttgcagagt ctcagctctc aaccagactc acgttcataa aataaacaaa 180
tgtttttggt aatggaaagc taatgtatac attatttaag gatagtatta aaaccagact 240
agatggatca agtaatacaa cagttacctc attaagcatc ctttctttgg ggatgtgaaa 300
aagttattct tttttttctt cttctttttt ccttttgaaa tggggcttta ttaattagag 360
atgtaatggg aaatcttatt ttttccccag actagtggct gttttctgtt tattttttaa 420
tgga 424

<210> 1113
<211> 418
<212> DNA
<213> Homo sapiens

<400> 1113
cccttagcgt ggtcgcggcc gaggtacaat aatggctcat tgcagcctca acctccaggg 60
ttcaatcaat cctcccacct cagtctccca agtagtcagg actacagaca tacagcacca 120
cggccagcta agtagagaca gggtttcacc atgttgccca cgctggtctc aaattcctat 180
gctcaaacga tccgcctgcc ttggcctccc aaagtgctgg gattacaagc atgagccatc 240
atgcccagct cgtaaagatc ttaagtcata taacaccctc actcagcttc caactggtga 300
tagctatatc attacataca gaatatttga gtagatggtt actaggacag caagatgtaa 360
gttgctttgg ttcaaatagt ggtttactag agtttaatct caagtgttgg ttctgttt 418

<210> 1114
<211> 419
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 23, 41, 191
<223> n = A,T,C or G

<400> 1114
cccttagcgt ggtcgcggcc gangtacact ctctgcctta naactaccat cctttgcact 60
acattccaga taaaggattt tgttactaca ttctaggtaa aggatattga tactatcctc 120

aagttacaca gaaaacactc aaggatgtaa aatcaatatt tatctcaaat ttgttgactg 180
ctactgctat ntttttgaa gaattaaaag ataaattaaa atttctaaaa atatgccata 240
tatcaataat ttacaatagc ttgatcagcc aaaaaatcca ccttgagctt aaagctagag 300
tttgataggg gtgatcctta ctctcctaat ttaaatatca ctgtatatta gttttacaat 360
atacagtgta tattgtgtat attgtgtata caatatacag tgtatattct ttttccaaa 419

<210> 1115
<211> 385
<212> DNA
<213> Homo sapiens

<400> 1115
acgaagtgtg tttcagagtg gcgaggaagg gcaagttgtt aagattggtt gttgaattag 60
tttctgtttg atgttaaaga gaacatagag taaatgataa tccctcgaaa gtggagatct 120
tggcaggctg gcgcctggtg gtatagtaga aatctgagaa agggggagga tattaagtca 180
gttttatcag gtaaagttga atgaaataat caagtttaag tgcgtcttgg gtatttgcaa 240
agatgtatag attaaggcta aaagggttgg agaaatagat ttgggagtta cctatgattt 300
tttttggtta ttctgctctc aggattgaaa actaaagaat ctcagaactg catttctaat 360
tagtgccata aaattcttta ttgat 385

<210> 1116
<211> 349
<212> DNA
<213> Homo sapiens

<400> 1116
ggtacgcggg gacattcaga ggtgagccca gagggggtaa agtggactgg ggagaacttc 60
ggaggatgtt catgtccagg agcagcccca cgccctgtat ggtcggtgtc tagagcctca 120
cagcaactaa gaccaaccca gctctcagaa gaaggaatgt caaaatgtca tgttcaattt 180
tacattcagt gcctggaatc ttttcttcac aattgaaatg aaatgtgctg aaggaggtga 240
atccatgcat taatcttcag ctcacaaagg aaatactaca taagaagcaa gaccacagac 300
tcaagacgga cataattgga tttttttgcc atggcctgga aagaaaggt 349

<210> 1117
<211> 627
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 486, 510, 516, 529, 558, 562, 575, 577, 580, 599
<223> n = A,T,C or G

<400> 1117
acctgccttg ttcatatcca actaattttt tttggctaat taagtaataa taatcaaaac 60
acttaaggtt ttaaaggatg aatgaccagt tgagagttac ttcttatttg ctcctaaatc 120
caatatattt cctgatcagt caataacact tagaacatct agttataatt ggtaatacaa 180
ttgtttaaaa aatgataatt aaaaggacta agactatata tggtcttttg aggggataac 240
aattgaatta tttaaacaaa gtatattagg ataataaaac acgagaagtc agtccagtgg 300
ttcaatccat tattcagaat ttcattctgt ttataattaa gcaacagtga ccttcaggtt 360
agtcttcctt agctgttaac aaccagctgg agaagctgag ggctattttt gcaattataa 420
tctgtgaaag attgaaaaac cgttaagata aataacgtgt ccaccttatt aacaggcact 480
catttncaca ctttgaatac atatcaatan gggttncaag ttcaatttnc ttaccgaact 540
ttttttaact cttttaanaa ancccctgta gggangnggn gcctcactgg actcttttnt 600
gggcattgca atctaatttc aaaagct 627

<210> 1118
<211> 360
<212> DNA

<213> Homo sapiens

<400> 1118
actctgtttc aggccctcac tgggtgccgg agatccacta gaatacaaga tctgtttctg 60
tgtctttgag ggacatgtat ccagcaatta gttacatcag tcccttgtag atgtcaattc 120
cagtgtcaca aatttcttgt tttgcaacgt tgagcaagtt tttttcaatg tttctaagcc 180
tcagtttttt gccctacaaa atgtggtaat aatatttaac cattagtaat gttgtgaaaa 240
ttaagcaaaa atacatgtaa tatatttaac aatgcttggt gttcgttaat gctttaatat 300
atgctaacta cttatattat tgttgttgtt gtgttaaaca tgcataagac agcaggtacc 360

<210> 1119
<211> 213
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 15, 133, 153, 158
<223> n = A,T,C or G

<400> 1119
ngagcgccgc ccggncaggt acctctatct tgctccacca ttgctgcctc tgatttttcc 60
ctatcaaaac aattatgagg tcttttccgc agactgtgtt agcagttttt gcatcctctg 120
ctcattcctc tgnctccttg tcttcctctc canctcancc catgccctgt cagtgccgcc 180
cagctcacaa ttgcctgatc cttggtgggt acc 213

<210> 1120
<211> 302
<212> DNA
<213> Homo sapiens

<400> 1120
cccttagcgt ggtcgcggcc gaggtacatc tacagagtgg tgggactggg ccaggccttg 60
aacccagtgg tctgattcag agcccatgct cttattagtg tttcccacaa atgggtagtg 120
aagtaaattt ctgataaaat gaaaagttct ctttgtatac tgatatccat tacaaaacct 180
gcaggactac agcacttcac aaaatgcatc atttccacaa acagtgatgt tctttttcag 240
ggtaaactat attgcaataa cagcaaatat gaaaagatac taatatagta tctcacatgc 300
cc 302

<210> 1121
<211> 392
<212> DNA
<213> Homo sapiens

<400> 1121
ggtacccaga gagccagaag gctgttggtg agatggagca gtcactgagc gggtcaccag 60
gagaacttac tttatgagat ctgctgctaa tttctgactt tgggcaagtc acctcaccag 120
tctggggcta agattcactc ctcatcagta aaatgaatac tttggatgag acgggaggtt 180
ttcccattct gatgctagga tcttgttcat gagttaatga agacagttga ggaaggtaag 240
gagctatttc tacttgatta gtgaggcttc agtctatttc aacatttcaa agtttttcat 300
gataatttgt tcatgaaaaa aaaagaaaac agaggagttg ctccagctct aaaaaaattt 360
gaaaaccaca ccctgtgcta attgcaagtc ta 392

<210> 1122
<211> 475
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 148, 150, 173, 178, 179, 188, 193, 195, 197, 200, 206, 220,
226, 229, 238, 240, 259, 277, 296, 304, 319, 324, 325, 336,
340, 346, 355, 364, 385, 400, 402, 403, 405, 415, 420, 436,
446, 447
<223> n = A,T,C or G

<400> 1122
cccttagcgt ggtcgcggcc gaggtgcagc tgttgtccat gtgtagagct tttaataacc 60
agcgcagcag gccccttcac ctgcttttat gcctggacca gatgactgaa tgtagaactt 120
taggcacttt ttttttttg aaacggantn tcggtttgtt gcccaggctg gantgcanng 180
gcccaatntc ggntnantgn aagctntgcc ccccgggttn accccnttnt tttgcctnan 240
cctcccaagt agctgggant acaaactccc accaccntgc ccggctaatt tttatntttt 300
ttantaaaaa cagggtttna ccgnnttacc cagganggtn taaatntcct gaccnggggga 360
tccncctgcc ttggcctccc aaagngctgg gattacaggn gnnanccacc aaatnggccn 420
tttaggccct ttttantttt aaaggnnaaa aaacatcctt taaaaagtta attcc 475

<210> 1123
<211> 398
<212> DNA
<213> Homo sapiens

<400> 1123
ccctttcgag cggccgcccg ggcaggtact caagctttgg cttttctgaa ctttccttat 60
tttcaaaaat gtcccccagc ccccacttcca cctgagacat tcacacaccc catttcctct 120
tccaggaagg ctcttatgtc gcctgggtaa acttactctt caagtctagt gacttttttc 180
cagaagcttt cctgatatct ttccatttca ccccactgct gacttattaa aatttctaga 240
attttatact tttacactac attctctgtg ttgtattctc ttattcaggg tctgctattt 300
aatttttaag ttccttgaaa atagagacaa tttcattgtt ttcatcagtt tggtccaagt 360
atatataaca tagatgaaaa atagatattt tgtattat 398

<210> 1124
<211> 284
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 251, 268
<223> n = A,T,C or G

<400> 1124
cccttagcgt ggtcgcggcc gaggtacttt ttgcattttc aaatgacttt gactattgcc 60
agagtcatta tagacctgcc tatgatgtag gagtttattg tatctagtgg aaaacatacc 120
tgtttgtggg gcagaagctt ctgttccatt catcctgatt ttagacacag catttaactt 180
ttcaggttca gttccatatg tataaagtag ggataatagt gacatcctag tgtattaaga 240
attaaggtgt nattatttct gtcactgnta cttcacccta attt 284

<210> 1125
<211> 401
<212> DNA
<213> Homo sapiens

<400> 1125
ccctttcgag cggccgcccg ggcaggtacc accatgccta gctaattttt tgtattttta 60
gtagagacag ggtttcagca tgttggccaa gctggtctca aactcctggc ctcctgtaat 120
ctgcccgcct gagcctccca aaatgctggg actataggag tgagccactg cgcccagcct 180
tcaaattcat tcttttactt ctgtaatcct agttgtttaa gaaattttgc aaattcaatt 240

aattttcttt tccctttccc tctctcactg atttgtcact ttctcaataa agaattcaag 300
gtttgaaaaa ttattgtggc ggcagtattc aaaaaacttt ccttcactaa acacacactt 360
aactgtgttc cactactgct gttgtctata ctttaaggga a 401

<210> 1126
<211> 403
<212> DNA
<213> Homo sapiens

<400> 1126
cccttagcgt ggtcgcggcc gaggtacagg taagggggaa gttccaaagc tgttagtcac 60
cttgttttca tgctgatcac ccaaccagat ctaatgtttg atgttctaag aactttaatg 120
ttttggagga aatatcttgt ggccttcaaa aaatcattct gtgaaatagt tgtttctacc 180
tacattcgtc tcattaattt ttctacatac agcagaattc tgcatatatt agaggtaact 240
cagtcagggt gtcatggagg aaggtggccc atggttcacc atcttgccaa tagaaaaacc 300
aataggaagt catctaacca tcattcggag ggattgaggt ctgtcatagg gagaacaaac 360
taaagaactg gactttgctt tcagtcaaga tggagtaaca ggg 403

<210> 1127
<211> 405
<212> DNA
<213> Homo sapiens

<400> 1127
cccttagcgt ggtcgcggcc gaggtaccag gttcaaatag tcagcagctc atcataatca 60
atgagcgagg acataaagta ggaaaaatgc atcaccatgg tgagcaagga aggcaagtta 120
ttggaggcac atgttaacac ataaaatata aaattaatat gatcacactg gaaaggcttg 180
cctgagccca cagtttgaat gcctacaata agatgagatg cacaacaaaa agcaagagaa 240
cctgatcaag tgggtgacct ggccatggtg ctctcatcag tggggaccca aatgcttatg 300
tggactcacc aggtatcgaa ttagacatga ataggagtgt ttgttgtgat ggcaagaaac 360
tatataatca aatgaataca atgaaacttt aaaaataatt gtaag 405

<210> 1128
<211> 405
<212> DNA
<213> Homo sapiens

<400> 1128
ccctttcgag cggccgcccg ggcaggtaca gacggtcaga aggaaagaag gagagggatt 60
gcctgctgcc tccccgcgtg cacacacgag agtgggtgct cccaccagct ttcagggggc 120
tttcttcacg aatgtgagca ctgattttgg gagatctgca gtggaaagtc aagtcatgaa 180
tattttttat aaagagagaa atgatgtaat tttatcacag aagatatttc agatgtattt 240
ttccatttta aaaattcatt ggcagtgctc atacaagaga attacttgac tgaaaatgac 300
tctgtccagt ttcttcctat ttcgttaatg attttgcagt cactgaattc tttctaaaag 360
ttgtataacc cagataaagt caggcctcct ggaagccagc ttcag 405

<210> 1129
<211> 353
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 96, 111, 207, 326, 328, 342
<223> n = A,T,C or G

<400> 1129
ggtacaggag gcagcttttt tctgctctct gttgacttct gaagccagcc tcatgatcgt 60
ttctctgcta gcttttgctt ccatctcatg gacatntata gtctcttcaa naataacaat 120

ttgtcctttc acgaattcat tttctttgcg caggtctcta agctgaagag aaagcaatta 180
cagctgtcct ataaaaatta acaattncat cattttctct aagcaagtca catctataga 240
ctgcattatc atatgaaaaa tgtaagagca ctatccctac atggactgga aaggtcacat 300
tttcaaaggc agcctgtaaa ctctgngntt agacctgggg gncaaattca aat 353

<210> 1130
<211> 341
<212> DNA
<213> Homo sapiens

<400> 1130
ccctttcgag cggccgcccg ggcaggtact ttgctacacg gccgggggcc attgagactg 60
ccatggaaga cttgaaaggt cacgtagctg agacttctgg agagaccatt caaggcttct 120
ggctcttgac aaagatagac cactggaaca atgagaagga gagaattcta ctggtcacag 180
acaagactct cttgatctgc aaatacgact tcatcatgct gagttgtgtg cagctgcagc 240
ggattcctct gagcgctgtc tatcgcatct gcctgggcaa gttcaccttc cctgggatgt 300
ccctggacaa gagacaagga gaaggcctta ggatctactg g 341

<210> 1131
<211> 396
<212> DNA
<213> Homo sapiens

<400> 1131
ccctttcgag cggccgcccg ggcaggtacc tattctctca attttgaaac ggcaaaaaat 60
ttttaaaaat taaataacat tcatgctctg ttttggactg acatcccaag atttagtgt 120
agggcagtaa ttttcatttt caaattacaa tgcaccttcc attcctcaga gaaaagtaag 180
tttctttttc tacctcactg tctcctggct ctcaaaccct cctaggctag taagcgtctt 240
cagcccagat gaagaaataa gaaaatccta tggaagggct ttcttgcttg aggctatagt 300
aacagccaca aaacacccac acacttttaa aattcttacc tcgggggtag ggatagcatt 360
aggagatata cctaatgtaa atgatgaagt taatgg 396

<210> 1132
<211> 313
<212> DNA
<213> Homo sapiens

<400> 1132
cccttagcgt ggtcgcggcc gaggtaccaa actgctgtcc ccaaataaag aacttacatc 60
aacaaggaat ataaaaatgt tatttaggac ttctgttctc agatgtttaa tacaaaggag 120
agattgttgt gccagggaac aaagtgatcc aatatccacg aagccagaat tctcctactg 180
cacattttgt ttccaaaaca ctaaggaata cagcaagatt tcaagttgga gtaaagaagc 240
tacttctgga aacaagagag gagataactg aggactttca cagaggggct gaaatccttc 300
ccggaaaact gtg 313

<210> 1133
<211> 331
<212> DNA
<213> Homo sapiens

<400> 1133
ccctttcgag cggccgcccg ggcaggtact accggacctg tttcatctct gcttcccaag 60
cctcaggcct gggcctcagg gattctctcc agtgcatacc ttaggctaca gctatagggc 120
agctgtggtt agggaaggtc cctatttaga atagttggtc aaaaagcaca tcacttctgt 180
ccctttcttg cagaactggt tgctgctctg gaatgaaagt ttgattggtc tgttagccat 240
gcccacctgg atttgggaaa gccaatagaa agaatcttct gctctcctat ctgctgttgc 300
tttttaacct gtagcctaaa aaatggcatt a 331

<210> 1134

<211> 330
<212> DNA
<213> Homo sapiens

<400> 1134
ggacacacag ttaaccacaa aacaggcctc tctgaaaaag ccattgccat ggactgccag 60
acagacaatg acaagacaca aataccttct ggtgtgtgag ccacgggaca tgtgagcttc 120
cccgctgatg ctcctcttat atcaaagatc acttttacaa gatgagcgac tcaatatctt 180
ttatcaaacc aatgatcacc tgcaagctat ggtatatttt tgcagctgtg tagagctatg 240
tggcatgaga atgtgggact tataaattgc tgatccaata aatagacatt atgggcaaca 300
gtgtcttatc agctagtgtg tacctgcccg 330

<210> 1135
<211> 356
<212> DNA
<213> Homo sapiens

<400> 1135
ccctttcgag cggccgcccg ggcaggtact tttctttatg aatgttatac cagaacttag 60
gaggaaaaaa tttttgagca tactgaatat taggaattgg atatctccct aaattattaa 120
agttcatctt ccataaattc tgtaaaactg aatgtagtat ttccccctct tcccatgcaa 180
gtaactgata tcactttaga aaacctgata tgaacattat ttgttattgt gcttttatga 240
agaattctgt ctaatcttct cataagaaga aagaattaga accaaaaatc taattatcag 300
atttagtaag atgtaggcaa gatcccctat ttttttcatt tatgtctttc aaaatc 356

<210> 1136
<211> 379
<212> DNA
<213> Homo sapiens

<400> 1136
cccttagcgt ggtcgcggcc gaggtacgca acatgacatt ggctggtgta aagatcttac 60
aattattttt aaaatttcat tgtattcatt tgattatata gtttcttgcc atcacaacaa 120
acactcctat tcatgtctaa ttcgatacct ggtgagtcca cataagcatt tgggtcccca 180
ctgatgagag caccatggcc aggtcaccca cttgatcagg ttctcttgct ttttgttgtg 240
catctcatct tattgtaggc attcaaactg tgggctcagg caagcctttc cagtgtgatc 300
atattaattt tatattttat gtgttaacat gtgcctccaa taacttgctt tccttgctca 360
ccatggtgat gcattttttc 379

<210> 1137
<211> 362
<212> DNA
<213> Homo sapiens

<400> 1137
acggggagcc ccttttttcct cttctccagg gtcttaatag ggtctggaaa gactcacctg 60
gtccaaaaag tttgaggaag aagcttctag tcttcagctc tgtagggtca acatgagatg 120
cttattgttc aagcctgtgt gatccaccca aaagtaggct gctctactac ggcatccatg 180
ctgctgtgac cggatggacc acaggacagt tgagacccca gctagatatc tgccaaaccc 240
aggactgtca gcaagggaat agggttcagg tcttctccat ttataaacta ccaacccctc 300
tttactctgg aatattctca ctctcctggc tgggatagac agtgttggct cattccactc 360
cc 362

<210> 1138
<211> 387
<212> DNA
<213> Homo sapiens

<400> 1138

ccctttcgag cggccgcccg ggcaggtacg cggggaaaca ggctactgct attaaggatt 60
gcacaacttc tgggcaaggc agaggtgggt ttggcttttt aaaaattttt tcagcctgtc 120
ctcatggaac tacatattct tttctaagaa cttttcatcc taacctccct actcacatct 180
tctaagtgtc tctgctctgg tgggaatgtg atggacaaca cagagccatc tcagaagcct 240
ctgtggccac caccaggccg gccagggtgc agggggccac tccctgggca gccatagggt 300
tctcagcaag gtgcattcgt cgtccctgct gagaatctga tggggcagca ttttttttta 360
attaaatgca agctgagtca tttcaac 387

<210> 1139
<211> 386
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2, 34
<223> n = A,T,C or G

<400> 1139
nncccttagc gtggtcgcgg ccgaggtaca acgntagcag caattcaaaa gggcatcgga 60
gacaactaat catttcataa tgagcgaggg gagaagcaat aaaagccggg agcccaagga 120
cggcatgata attttgcaga gtctcagctc tcaaccagac tcacgttcat aaaataaaca 180
aatgtttttg gtaatggaaa gctaatgtat acattattta aggatagtat taaaaccaga 240
ctagatggat caagtaatac aacagttacc tcattaagca tcctttcttt ggggatgtga 300
aaaagttatt cttttttttc ttcttctttt ttccttttga aatggggctt tattaattag 360
agatgtaatg ggaaatctta tttttt 386

<210> 1140
<211> 387
<212> DNA
<213> Homo sapiens

<400> 1140
ccctttcgag cggccgcccg ggcaggtaca tggctaaaat cattatactt tccccgtctt 60
atgataatct cagcaaaaca caagcacgga ttctttccta gtcttcctgc ccatccaccg 120
cccgccattt tccctggacc ccgtgtgatg acagtgaggc ctccttattc cttgtccagc 180
agggattgtg gtatgagtgt gttcagggac agttatgagt ggaagttggg gagagacgtg 240
gaagggcggt tttgtgtggc gtctgtgcca ttacagcctc agctacagag actgcacttg 300
cgggcagctg cagtgctgga agcagatggg gccctgtgcg aggggtcagt ggaaggcagt 360
gactttgaga gctctgatgg tagttgt 387

<210> 1141
<211> 385
<212> DNA
<213> Homo sapiens

<400> 1141
cccttagcgt ggtcgcggcc gaggtacttc tatacagtgg aatgctactc agcaatgaaa 60
aagaaaaaga tgcaacaacc tggatagacc tcaaaggcat tatgtatagt aaaaaggtca 120
accttaaaag gttatatatt atatgattgc atttatataa cattctcaaa ataaaaaaaa 180
ctatagagga tgaagaatag actagtgatt tccagggcac agggacaggg taggaaagaa 240
ttggtagaca atgtgaatgc aaagaggtct cctgtgttga tggaacagtc tgtatcttga 300
ttgtggtagt ggctactcaa atctatgtat ggaataaatt aaataaaatt atacatatac 360
acacaaataa ctgcaggttt aaaat 385

<210> 1142
<211> 388
<212> DNA
<213> Homo sapiens

<400> 1142
ccctttcgag cggccgcccg ggcaggtaca gtggcctaga tggctttaga cttcaggatt 60
ctttaccatc tagcccсttt tactctacca acttattttg ttacttgttg acataatctg 120
tagccaggaa agcctgcata cagtttgtta tccctctgtc tttgctcatg cgttttctgc 180
atctggaatc atcttcctct cttctctctg ctggttcatg tccctatttt ctttcaaaac 240
tctctttgaa atttacattt ttcaggaagc ctttctcttt ggcttgctgg acatctgacc 300
ggcatgttat cttttcatat ttgttcaaaa tgtcattttc aacatttact caactaatta 360
atatcaagga cttgccatca attctctt 388

<210> 1143
<211> 133
<212> DNA
<213> Homo sapiens

<400> 1143
cccttagcgt ggtcgcggcc gaggtacagc tgttgtccat gtgtagagct tttaataacc 60
agcgcagcag gcccсttcac ctgcttttat gcctggacca gatgactgaa tgtagaactt 120
taggcacttt ttt 133

<210> 1144
<211> 381
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 69, 293
<223> n = A,T,C or G

<400> 1144
gccgcccggg caggtacact gttctatatt ttagcaggga aggaatttgt gtatgtgtgt 60
gctaactana aacaatgaga aatagctcta atgaaagtta tatggtcaga atttggctac 120
aagctctgca tcattagtaa agcggagtat tattggcaga tgtcatgcta ctttccaaaa 180
agcctgaacc catcctgatt tctcctttct tagttgaaat gccaacaatt gcatatttgc 240
ttaattattg ctttttaaaa tattggctct gtataagcaa gggaaagtaa tanaaaaagt 300
attgttcttc caagtaaagc agaacacacc aagtggacaa tagcagctta tattttcact 360
caacatggga tactattttt a 381

<210> 1145
<211> 392
<212> DNA
<213> Homo sapiens

<400> 1145
ccctttcgag cggccgcccg ggcaggtaca cagcatgcag gctgcagcct gggcccctgc 60
caggcaagat gtagggtgtg aggttgtgct ctgccccatt cactctggaa cagctccgcc 120
cttgagtcca ggatattttc tcagtgcctc cacgcatttg accatccaga aaacatccca 180
actcagtgtg cctcggccac cataaatcag ccaaccacac atgctgccct caatgcttct 240
gaatatcaag ggaaaggatc tgcctcatcc tgccctgctc ctgaggcttg cgcattgacg 300
cttgagttat gtcattattt ttttaagtga tagaaatcta gtcaatgatt tgtagcaatc 360
accactgtgc aacgtatgcc aaaaaactct gt 392

<210> 1146
<211> 334
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 7, 155, 224, 239
<223> n = A,T,C or G

<400> 1146
ccccttancgt ggtcgcggcc gaggtacacc tcccaatgtg gagcctggaa ccctgggaag 60
ggcaggcggg cagagcctcc tcacagggac tggagtcttg ggaggtttac cctataggaa 120
gagagcagtg attcgtgttg ctcaggattc cttanattcc tttgggagag ttaatcatct 180
ttactaccca gagtgcaccc ttaggtctag gttgtcatac ccantgattg atatcttang 240
gtaaaagacg acctgagaat ggtctggcca tgatcataaa gatcggattg ctatgatcat 300
gatcagtcag ggctttggtg ttttattcta attg 334

<210> 1147
<211> 368
<212> DNA
<213> Homo sapiens

<400> 1147
ccctttcgag cggccgcccg ggcaggtacg cggggacatt cagaggtgag cccagagcgg 60
gtaaagtgga ctggggagaa cttcggagga tgttcatgtc caggagcagc cccacgccct 120
gtatggtcgg tgtctagagc ctcacagcaa ctaagaccaa cccagctctc agaagaagga 180
atgtcaaaat gtcatgttca attttacatt cagtgcctgg aatcttttct tcacaattga 240
aatgaaatgt gctgaaggag gtgaatccat gcattaatct tcagctcaca aaggaaatac 300
tacataagaa gcaagaccac agactcaaga cggacataat tggatttttt ttgccatggc 360
ctggaaag 368

<210> 1148
<211> 309
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 155
<223> n = A,T,C or G

<400> 1148
ccctttcgag cggccgcccg ggcaggtaca aaagctgagg gaaaaagttt cagcttcaag 60
cattaacgtt ttagttcata aatctgaagg aaaataaaga gaaaataaag gcattaagag 120
atatgaaaca atgtaaaaat gaatatttct tttangaatc cttgtgaata tatgacagta 180
tacaagctac agaaaactag tttactggga ggatcacgag gtcaggagat ctagaccatc 240
ctggctaaca cggcgaaacc ctcttctcta ctaaaaaata caaaaaatta gccaggagtg 300
gtggcgggc 309

<210> 1149
<211> 317
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 159, 273
<223> n = A,T,C or G

<400> 1149
nggggccctt tcgagcggcc gcccgggcag gtacaaggtt ggtaggagga agagaagaaa 60
tgattggctc ccagaggctt catgggctcc caattcatga ttctttctct gtggctaatt 120
tttgttaagt ataagaattc caggaatctc ttaggaatng gggagactgc tttctcctga 180
aatataaaac atctgctctt ggtctgtttg gcgctccact gtctgagggg aaaacaggga 240

aaaagaggta atataaaaca gacattgttt canacaataa atccccttt actcattaat 300
gagaaaataa atttagg 317

<210> 1150
<211> 324
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2
<223> n = A,T,C or G

<400> 1150
nnggggccct tagcgtggtc gcggccgagg tacaccaggc aaaagacagt gggagcccta 60
cctaaggtca aggcagaggg atagagagta ggagacagat tctaggttac aaagttacag 120
ctgcaaagac tgagtcagct agttgtggtc acgggcagga gtaggaggag gaaggtaggg 180
gctagtcaag gtcagcgtgt tgggtcctgc tgcggtcact gccaggttct tccatggctc 240
cgaaggtgga ccacaggagc tttctccatc cccagaaaac ctgttgtcag ctcctctgaa 300
ctccatctac tgtgcatgtg gcac 324

<210> 1151
<211> 304
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 146, 147
<223> n = A,T,C or G

<400> 1151
agcggccgcc cgggcaggta cacactagct gataagacac tgttgcccat aatgtctatt 60
tattggatca gcaatttata agtcccacat tctcatgcca catagctcta cacagctgca 120
aaaatatacc atagcttgca ggtgannatt ggtttgataa aagatattga gtcgctcatc 180
ttgtgaaagt gatctttgat ataagaggag catcagcggg gaagctcaca tgtcccgtgg 240
ctcacacacc agaaggtatt tgtgtcttgt cattgtctgt ctggcagtcc atggcaatgg 300
cttt 304

<210> 1152
<211> 433
<212> DNA
<213> Homo sapiens

<400> 1152
ccctttcgag cggccgcccg ggcaggtaca tgacattttg cactcagtgg tatccctagg 60
acttgtttga atacattgct gtatttatct aaaagggcaa agctttcatt aaaaataatc 120
tagtggcaat gttgcacagc cctaattctc tactacatga aaagttatat tttcaggccc 180
agagacacag gattacaggt cagtgatagg caatgcatat ttgaagtata ccaaaagcac 240
caaataatgt agctgagtat ccagaaggaa ctgacataaa atgcaggggt ctaattacta 300
gagtcattgc cacagaacca gtcatcgatg actaaattat gcacctggtt tcctgggaaa 360
atctgcagtt tggggaacat ttcactacac ttcagagcat tttaagtctt taaatcattt 420
agcttttaaa atc 433

<210> 1153
<211> 392
<212> DNA
<213> Homo sapiens

<400> 1153
gccgcccggg caggtaccct aaacaaatat taatacatag actctgagtg catgctgctc 60
acctataaat tcatgcttgg gtaaaagaac atgcttttac gatagtctga gtcttaaaga 120
gaaaggcatc aagtgcaggt cacctggctt cccttctgcc atagacacca gataaattcc 180
aaaaaatgca ggggatgtgg gtctagagct ttcctaactt tgtaattatc gcaactggtt 240
ctgaaagtta ctatatcctc agtaaagaat tcaaagagac taagtctgct tctccaggtc 300
tccaactctg agaacacttg gaactctgat gtagatctca acatactgaa atccagtttt 360
cctgtctcta gcctttgact cagaagcacc ac 392

<210> 1154
<211> 339
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 283, 329
<223> n = A,T,C or G

<400> 1154
cccttagcgt ggtcgcggcc gaggtacctt ctaaatgcca ggctcatnta cggccatacc 60
accctggacg tgcccaatct cgtctacgtg ccaggcttgg gggcatatgc agatacatgg 120
gacagatccc ttggaggata cagacagata agctcatggt tcctgcacag ggtggtgtgg 180
gctcttactg ctgagctgag acctatgtgg tgactgtgtt ggactgaacc ccagggaaag 240
gtgtggggtc gggtgtgatg ggcacaaaca gaaaagtggc tgntatgatt cacaaactta 300
ttgcatgtca ttgtacctgc ccgggcggnc gctcaaggg 339

<210> 1155
<211> 426
<212> DNA
<213> Homo sapiens

<400> 1155
ccctttcgag cggccgcccg ggcaggtact ggggcactca ttctgcatgc tccgagagat 60
gcacttccag tttccgaaga agggtcctag aatgcttttt tgcacccggc tttttaccct 120
atcatcattc attttcctag gcagttttgt tgtttccttt cttctgcaaa gccgggtaga 180
tgtctctcac agacaagcta gaaatgctga gagcttctga tactctgttt cctgtgcctc 240
tgtctactgt gctaaaataa atacttctaa cttccttttt ggaaaccata gcaattattt 300
cattgctttg aagaccttca tactcctggt ccccaccctg caacatggat tcctgtggct 360
gctttcttcc aaatgctaca gtgctcagtg ttgacttttt caagatgact cacatgtaac 420
ttaatg 426

<210> 1156
<211> 403
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 50, 57, 85, 100, 118, 154, 219, 224, 226, 247, 261
<223> n = A,T,C or G

<400> 1156
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttttn gacacanagt 60
ttcactcttg ttgcccaggc taganagcca tggtgcaatn tcagctcacc acaacctntg 120
cctcctgggt tctagccatt ctcctgggag gcanaggttg cagtgtgcca agatcacgcc 180
attgcaatcc accctgggcg acaagagcaa aactccatnt catntnagaa aaaaagaaaa 240
aaaaaangaa aagaaaaata natgagcatc ataatcaaaa aggcagccct aagaataaat 300
gaaaagttca cagaaaaaaa taaaaatgca aatatccctt aaacacagaa aaagtttcta 360

agctcattct taaaagggaa aatgcaaata attaactaat taa 403

<210> 1157
<211> 430
<212> DNA
<213> Homo sapiens

<400> 1157
cccttagcgt ggtcgcggcc gaggtacttt tctttatgaa tgttatacca gaacttagga 60
ggaaaaaatt tttgagcata ctgaatatta ggaattggat atctccctaa attattaaag 120
ttcatcttcc ataaattctg taaaactgaa tgtagtattt ccccctcttc ccatgcaagt 180
aactgatatc actttagaaa acctgatatg aacattattt gttattgtgc ttttatgaag 240
aattctgtct aatcttctca taagaagaaa gaattagaac caaaaatcta attatcagat 300
ttagtaagat gtaggcaaga tccacctatt ttttcattta tgtctttcaa aatcaatcac 360
attctattat tcaccgatcc actaaacaga tgtagaattc ctattatgta gcaggcattg 420
ttctgttaat 430

<210> 1158
<211> 354
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 65
<223> n = A,T,C or G

<400> 1158
ggtacgcggg gagacacatt cagaggtgag cccagagggg gtaaagtgga ctggggagaa 60
cttcngagga tgttcatgtc caggagcagc cccacgccct gtatggtcgg tgtctagagc 120
ctcacagcaa ctaagaccaa cccagctctc agaagaagga atgtcaaaat gtcatgttca 180
attttacatt cagtgcctgg aatcttttct tcacaattga aatgaaatgt gctgaaggag 240
gtgaatccat gcattaatct tcagctcaca aaggaaatac tacataagaa gcaagaccac 300
agactcaaga cggacataat tggatttttt ttgccatggc ctgtaaagaa aggt 354

<210> 1159
<211> 351
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 196, 261, 293
<223> n = A,T,C or G

<400> 1159
cccttagcgt ggtcgcggcc gaggtacatg tgcacaacgt gcaggtttgt tacatatgta 60
tacatgtgcc gtgttggtgt gctgcaccca ttaactcatc atttacatta ggtatatctc 120
ctaatgctat ccctaccccc gaggtaagaa ttttaaaagt gtgcgggtgt tttgtggctg 180
ttactatagc ctcaancaag aaagcccttc cataggattt tcttatttct tcatctgggc 240
tgaagacgct tactagccta ngagggtttg agagccagga gacagtgagg tanaaaaaga 300
aacttacttt tctctgagga atggaaggtg cattgtaatt tgaaaatgaa a 351

<210> 1160
<211> 365
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 253, 295, 297, 348
<223> n = A,T,C or G

<400> 1160
ccctttcgag cggccgcccg ggcaggtact ttttttttctt tctttctttc tttttttttt 60
tttgtatttt tagtagagac taggttttac cgtgttagcc aggatggtct ggatttcctg 120
acctcgtgat ccgtccgcct cggcatccca aagtgttggg attacaggcg tgagccacgg 180
agcccggcca taggcctgtt tcttattcta tattcctgtt aatgtaaacc tcctgagatt 240
ggaagacaat cantttttaca gggtaagaat tgttttaatt atgtggcagc ttttntncaa 300
acatgaagag aaacattaga aatacgttta ataaaattct ctattatntt gttttctttc 360
agtta 365

<210> 1161
<211> 372
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 365
<223> n = A,T,C or G

<400> 1161
ccctttcgag cggccgcccg ggcaggtacg cgggggacat tcagaggtga gcccagaggg 60
ggtaaagtgg actggggaga acttcggagg atgttcatgt ccaggagcag ccccacgccc 120
tgtatggtcg gtgtctagag cctcacagca actaagacca acccagctct cagaagaagg 180
aatgtcaaaa tgtcatgttc aattttacat tcagtgcctg gaatcttttc ttcacaattg 240
aaatgaaatg tgctgaagga ggtgaatcca tgcattaatc ttcagctcac aaaggaaata 300
ctacataaga agcaagacca cagactcaag acggacataa ttggattttt tttgccatgg 360
cctgnaaaga aa 372

<210> 1162
<211> 409
<212> DNA
<213> Homo sapiens

<400> 1162
ccctttcgag cggccgcccg ggcaggtact cttccttcca gaggtttccc catgccctct 60
tttggacttg atgggggtca tttgggacaa taaggcctga taactccttg gacttaggaa 120
gcgagagagc aggaatcaag aaaagctttt gtgtttttttg gtttgtgtag aaaatatgat 180
ggattgagat aaaatttttc aaaataggcc caatgaagaa gagcagattc aaggagtaaa 240
ggattattta tgaggatggc ctgtgcaaaa agacacccag agatttcatg ctgttgattc 300
acagaaagcc tgttcctctt cactccgtag agtcctcaga gtctggatca tcccttacag 360
aagatccttg ataatatttc tgatatacct ccaaggttcc gtttgtcaa 409

<210> 1163
<211> 253
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 228, 234
<223> n = A,T,C or G

<400> 1163
acctggcttc tcttggccag atcgaaggac tgtaatatga tttaagttgt gaatatgcct 60
tagtatgtga gatgtctttt catatgaggg agttcttaac ctactttagc ttaatcacca 120

gatccttttg tcttttatgc taacacataa aaaacacagg cttggtatta cagctttttg 180
tcttctatgc atgagcagtt ttgttttgta tcccagggat cccagaanaa cagntttgct 240
tggccagggt acc 253

<210> 1164
<211> 296
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 80, 262, 267, 271, 283
<223> n = A,T,C or G

<400> 1164
ccccttagcgt ggtcgcggcc gaggtacgcg gggaattgct aatgggaatg gggtttattt 60
tgaggtgata gaaatattgn tgaaattaga aattggcggt gattgctaat gggaatgggg 120
tttattttga ggtgatagaa atattgatga aattagaaat tggcggtgat tgctaatggg 180
aatggggttt attttgaggt gatagaaata ttgatgaaat tagaaattgg cggtgattgc 240
taatgggaat ggtgtttatt tngaggngat ngaaatattg atnaaattag aaattg 296

<210> 1165
<211> 414
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 300
<223> n = A,T,C or G

<400> 1165
ccctttcgag cggccgcccg ggcaggtaca aaacaaagac ccttgccttc actgcactca 60
tgttctagtt gtgcgttgtg cgtgtcttta tttctcaata agagtttcat ggccctacca 120
cctaaaaatg ccacaaaaca acaatcccac aatcccattc agaaagtgaa tgcatttaac 180
ttgaaacacg cagtataaat ctaaaggaac agggtcaaat aaatgaagct gaggctgtgg 240
ctcatacttg taatcccacc actttgggag gcccaggtag gatgttcact tgaggccaan 300
agcttgttac cagcctgggc aacaaggtga gaccccatct ctattaaaaa caaacaaaca 360
aacaaacaaa caaacatgag gctgagaaaa aaatggcaag ggatatcaaa aact 414

<210> 1166
<211> 358
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 136, 227, 256, 289
<223> n = A,T,C or G

<400> 1166
ggtacctggc tgtgctagac aggggaaagg agatgctttc attgctggca ttttaatggg 60
gtccaggaca ctatggggag gggatttagg aagaaggcta agccagcagt ggaagacatt 120
tggaagcttg gggcantgga atttgccaac tgaaacagga agtatttgga taaattgaag 180
gtatgggatg atggggtatg cctgggttgt aggacatgga agacgtnagt ctggggcctg 240
cttaagttca tccctnaaaa tgtcttgcct agggaccact gtgattttnt aataatatcc 300
cttaattcta ctctagatga tatcttttaa agaaccttta ctttttgaaa aaagtaaa 358

<210> 1167

<211> 410
<212> DNA
<213> Homo sapiens

<400> 1167
ccctttcgag cggccgcccg ggcaggtaca gtcaaatgca gaaggcattg tattagcttt 60
ttgctgcgtg tagttgaaaa ggtttggagg tttggaggtc gttttctggc cggagaatac 120
ataattcttg ggaaaatgag ctggaagata atgagaatct accttatttc tctgcacagg 180
aagatcagtc tgcctgcagt tagctaatct ccctgaacct tgctcactac atcaggagac 240
cataaagcaa aagggtaaat caacagttcc tttaagacac tttatccaaa aggattctcc 300
tttcttgcct gtaactctga caaggacagt gagggtgaac gctccaactg tcactgttca 360
ggaaaaggcc agcttatcct gcagcctcag cttcctgggc ggatgatccc 410

<210> 1168
<211> 396
<212> DNA
<213> Homo sapiens

<400> 1168
ccctttcgag cggccgcccg ggcaggtaca gattaaatag gttaaccttt atgtgggtaa 60
attatatcaa taaagctgat gaagaactgg tagatgacaa gtgtaatata aaggcaacca 120
taaatacaaa atacaggaat aagcaattta cttagaagat aaaaaagaag gcttctggcc 180
aggcgcggtg gctcacacct gtaatcccag caccttggga ggccaaggca ggcgaatcac 240
aaggtcaaga gagatcgaga ccatcctggc caacatggtg aaaccccgtc tctactaaaa 300
acacaaaaat tagctgggcg tggtggcgca cgcctgtagt cccagctact ctcgggaggc 360
tgaggcagaa gaattgcttg aacccgggag gcgggg 396

<210> 1169
<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 292, 320
<223> n = A,T,C or G

<400> 1169
cccttagcgt ggtcgcggcc gaggtacatg cctgtaatcc cagctactgg ggaggctgag 60
gcaggagaat tgcttgaacc tgggaggcag aggttttagt gagctgagat cccgccattg 120
cactccatcc agcctaggtg acagagcgag cgagactcca tctcaaaaaa gagaaagaag 180
aagaagagag ctcaacaatg cagccaggga agatttcctg taggagtctt gagacaggag 240
aaagagagat ggaagagaaa gaaagcgcat gctgcctctt gaaaaaatgg anagatcacc 300
cccgcgtacc tgcccgggcn gccgctcgaa aggg 334

<210> 1170
<211> 391
<212> DNA
<213> Homo sapiens

<400> 1170
ccctttcgag cggccgcccg ggcaggtaca gtggagccaa gattagatcc aggggacctg 60
gtttcccagc cccatcacct cagtcctatt gcattaccct ctggaaatgc tcagtccagt 120
aaaggagaga gtgatgatgc aatgatgtga ctgcttccag tgaagagtaa aagtaatgaa 180
ctagaaacgg gagaaacaga ttgacacccct tgagttgtct ttctggttag ggcttttggg 240
tttttgttct gtaatacagt ccaatgtggt ggccattcaa gggagaagga ccactcatca 300
gccctcctgc tccctcaccc ccatcttaat taaataagcc tccttaggat ctcacacacc 360
tgcatgtaac aaaacaggtt ttaaaaatct g 391

<210> 1171
<211> 411
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 307
<223> n = A,T,C or G

<400> 1171
ccctttcgag cggccgcccg ggcaggtacg ttgtcttgtg gaaattttag agttgcttcc 60
ttatttaggg aagataattt actcaactcc ctttgaacac gtttgctaat tccatttagg 120
ttttattcca gtaaacaata gaattgaccc tagttttact aatcatatta aatttttata 180
tcttaattat aatccagaga gtatccgctg gctaacctaa tctgaaaatt aactaactcg 240
tggaggaata ttcaagcatt cggatagttt taaattcaac tgtgctaata caaaaaaaaa 300
ttagctnggc attaaaaggt tagaggagga tatgtttgta aaactaaatg gaccgatgaa 360
aacctggact ttatatcata gaagaacaga gtgaaggtaa attgcactgc c 411

<210> 1172
<211> 389
<212> DNA
<213> Homo sapiens

<400> 1172
ccctttcgag cggccgcccg ggcaggtact tactttgatt cctctagtgc aagattatag 60
tggggttata cctgagactt caataaatgt ttgactaact aaactaaaat agcttagggt 120
aaggactact tccccaaacg cccttttaaa catgtgagaa agggaatctc cctgacatac 180
tggtatggcc atttgtagca atatactgag agtgacttgg gtgattttct ggggcgatca 240
accacattcc atgagcaggt taactgtgga agacacctgc ccttgagcat cgcgtttggg 300
ccacatgcgt caatggggaa atttgtgttt ccattctgct tcttgttttg ccttcacaac 360
ttcagggata gaagcgtatt ccatttta 389

<210> 1173
<211> 395
<212> DNA
<213> Homo sapiens

<400> 1173
ccctttcgag cggccgcccg ggcaggtact tttctttatg aatgttatac cagaacttag 60
gaggaaaaaa tttttgagca tactgaatat taggaattgg atatctccct aaattattaa 120
agttcatctt ccataaattc tgtaaaactg aatgtagtat ttccccctct tcccatgcaa 180
gtaactgata tcactttaga aaacctgata tgaacattat ttgttattgt gcttttatga 240
agaattctgt ctaatcttct cataagaaga aagaattaga accaaaaatc taattatcag 300
atttagtaag atgtaggcaa gatccaccta ttttttttcat ttatgtcttt caaaatcaat 360
cacattctat tattcaccga tccactaaac agatg 395

<210> 1174
<211> 222
<212> DNA
<213> Homo sapiens

<400> 1174
cccttagcgt ggtcgcggcc gaggtacgcg gggaattgct aatgggaatg ggtttattt 60
tgaggtgata gaaatattga tgaaattaga aattggcggt gattgctaat gggaatgggg 120
tttattttga ggtgatagaa atattgatga aattagaaat tggcggtgat tgctaatggg 180
aatggggttt attttgaggt gatagaaata ttgatgaaat ta 222

<210> 1175

<211> 461
<212> DNA
<213> Homo sapiens

<400> 1175
cccttgcact gtgacaagct gcacgctcta gagtcgaccc agcaatctcc ctgctgctcc 60
gtcgtccgcc aggacgtgaa gcattcccgg gcgacgtttt ctacctccac tctcgtctgc 120
tggagcgtgc tgcacgtgtt aacgccgaat acgttgaagc cttcaccaaa ggtgaagtga 180
aagggaaaac cggttctctg accgcactgc cgattatcga aactcaggcg ggtgacgttt 240
ctgcgttcgt tccgaccaac gtaatctcca ttaccgatgg tcagatcttc ctggaaacca 300
acctgttcaa cgccggtatt cgtcctgcgg ttaacccggg tatttccgta tcccgtgttg 360
gtagtgcagc acagaccaag atcatgaaaa aactgtccgg tggtatccgt accgctctgg 420
cacagtatcg tgaactggca gcgttctctc agtttgcatc c 461

<210> 1176
<211> 445
<212> DNA
<213> Homo sapiens

<400> 1176
cccttcgagc ggccgcccgg gcaggtacca gaggaggaga tggacgatca gagccatgcg 60
cctgtttcct gcacccccctg cgcactggtt ctatggccac aaggagtctt acccagtaaa 120
agagtttgag gtgtatcctg agctgatgga aaaataccca tgtgccgttc ccttgtgggt 180
tggacccttt acgatgttct tcaatatcca tgacccagac tatgtcaaga ttctcctgaa 240
aagacaagat cccaaaagtg ctgttagcca caaaatccct gaatcctggg ttggtcgagg 300
acttgtgacc ctggatggtt ctaaatggaa aaagcaccgc cagattgtga aacctggctt 360
caacatcagc attctgaaaa tattcatcac catgatgtct aagagtgttc ggatgatgct 420
gaacaaatgg gaggaacaca ttgcc 445

<210> 1177
<211> 300
<212> DNA
<213> Homo sapiens

<400> 1177
actgcagctg gtgggtcacc aggacgaccg tcttccccct gagtgtcttc ttaatgcact 60
cctcaaaaat gtgcttcccc acgtgggcgt ccacagtaga caggggggtcg tccagcaggt 120
agatctgacg gtcggaatag acggcgcggg ccaggctgat cctctgtttc tgcccccccag 180
agaggttgag gccccgctct ccaatctctg tcatgtctcc aaagggcaga agttccaggt 240
cccgattcag ggagcagcag tggagcacct ggaggtatcg ggccttgtca tacccgcgta 300

<210> 1178
<211> 175
<212> DNA
<213> Homo sapiens

<400> 1178
actgaactgg gaggttttta gtctgatagc cacaattttg acctaggcag gaagctttac 60
agcttgaggc agtttcatgg tctgaagaca aacttcttgt gacttgctgc cggtgttgga 120
ctgcaggaga gagcctcact gggtcaggag cacgagaaca aagtggatcc cacta 175

<210> 1179
<211> 305
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 1, 7, 9, 160, 162
<223> n = A,T,C or G

<400> 1179
ngggggncnt tagcgtggtc gcggccgagg tacattggta tgagggtatt actgggacca 60
ggcaggccaa ttcgtgggca cccaggtggc ctgctcaaat actggtagtg gaatcagtgg 120
attgagcaga tgagagggtt cttgagtcac tggataaccn gngtgatgtg ggtgatggta 180
gtagtgggat gatcctctgg ggcccaagtg ttgcacactg atgttgacac tggctacagt 240
gcacggtcac cagccagagt cccagacaca caactctcag gttcttccac tctctgtgac 300
agggg 305

<210> 1180
<211> 475
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 11, 343, 361
<223> n = A,T,C or G

<400> 1180
actgaaaaat ntcatgtcct gggaaacccc tcagtcctgg gcaaactgag accggtggtt 60
atcatacaaa gagaaaacca aataagacta aaattatgtc caaacacttt cattgtggct 120
aggaacacaa gttgaacacc ctaataagga acacaaataa taaaagcttg cattattgag 180
tgcttatatg ggtaagtat tatactatta tctccatttt aaagataagc aaactgagac 240
atagtaaggg taaataagtt agttagtgaa ggcaccagaa tttaaaccca gaaagtttgg 300
ttttagagca tacactacaa tcagcactgt atggaaagat atntaagagc agagacaggc 360
ngagatggga gcactgggga agacatcatg gaggggctag atggctacat cttggcttta 420
aaaagtgagc aaaagtaaaa gttagaaagg agatgaaagt atcatttata aatgg 475

<210> 1181
<211> 327
<212> DNA
<213> Homo sapiens

<400> 1181
ccctttcgag cggccgcccg ggcaggtact gaaaaatctc atgtcctggg aaacccctca 60
gtcctgggca aactgagacc ggtggttatc atacaaagag aaaaccaaat aagactaaaa 120
ttatgtccaa acactttcat tgtggctagg aacacaagtt gaacacccta ataaggaaca 180
caaataataa aagcttgcat tattgagtgc ttatatgggg taagtattat actattatct 240
ccattttaaa gataagcaaa ctgagacata gtaagggtaa ataagttagt tagtgaaggc 300
ccagaattta aacccagaaa gtttggt 327

<210> 1182
<211> 594
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 557, 567
<223> n = A,T,C or G

<400> 1182
acaaccctac cactactcta catcatggaa gtcttaacga tttagggtaa tacgataatg 60
agaataccaa tatggatcta ttaaatgagg agctgagtaa gctccaaatt tccctctaga 120
ttggtaagtc tataatttat tatatgaaat tcctaattat taccatacta agttcaaaag 180
attttaaccc aaatccttta gtaactgata aacctcattc ttaagattct tgacagaaat 240

aatcttgatg agcttcttct cttcatgatc tttccaatgc tgttataatt ttgagggaat 300
tactcttatt ttcattaatt ctgttgcaag gaggaaaaga ctgactctgt gttggggttt 360
cttttctcta taaggcacaa gacctaaatg tcattgaaga agtgattcga atgatgttag 420
agatcatcaa ctcctgcctg acaaattccc ttcaccacaa cccaaacttg gtatacgccc 480
tgctttacaa acgcgatctc tttgaacaat ttcgaactca tccttcattt caggatataa 540
tgcaaaatat tgatctnggt gagtgtnaat gaagacattt attatgaatc tttt 594

<210> 1183
<211> 267
<212> DNA
<213> Homo sapiens

<400> 1183
acgctaggcc gcggccttct tttctcccag aaaggtgacc ctccccaccc tgcgtcctgc 60
tccttccgtc catactgatg tttgttttgc tggaggccag tagcaactgg acagtagctc 120
taggggagga gaatccacct gcggcgaagg gtgggatttg ttttctttga gccttctcca 180
gtgtggggca gctggcgcat ctccacttag cgccgggggt ccgggatcct acatcgcagg 240
gactggggat ctcctgggtt ctgtacc 267

<210> 1184
<211> 534
<212> DNA
<213> Homo sapiens

<400> 1184
cccttagcgg ccgcccgggc aggtacagag ctggaggccc aaacagccag ccaaatcttg 60
ctgtatttta tccaccatag tataatccag agactgtgga ccccaaattg ggatgctttt 120
aaaatccaaa gtagttctgt atacacattt gaagaaaaat gctgttgaag aaatgtatcc 180
ataaaacact tcaggtcaaa aagcaaaaga atatcaagaa aaagtttaaa taacatgatt 240
cctactggtt ttagatcata attatcatcc tatattattt atattcgtat cactgttatc 300
tttctctgac aaataattct gaaatacaat acattttaaa gttatgcagg attttaaaga 360
cctcgtcttc aagcaaatac aagaagttta ataacaaact ttaaataaat gctcatttaa 420
ataaaagttt atttttctcc tggccaaata tttggtgaat tacttacaaa gatactttca 480
atgattagat tccttagctt aaaaaaaaat tcatttgaat acgctttagc ccaa 534

<210> 1185
<211> 680
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 487, 527, 541, 549, 560, 597, 604, 633, 637, 654, 660, 665
<223> n = A,T,C or G

<400> 1185
ggtacctgaa gcctctgtct gactttccag ttggaaagga catgcttttg tttcccaccg 60
actgtttaat ttttttggct gcaatgcatt tcttgccaga cggggtctgt ttatttggat 120
caaactgaga agaaactttg gatttgctgt ttccagcaaa agccttgaag tctgactggc 180
tgtagtcgta aggcgtaaac tctttttctg gtggctctgg gtcctttggc ttcttggaaa 240
ttttgagtcg tttcttctct tgtttctgtt ctgtggtcct tgggtcgctt gttgctcgct 300
ctctcttctt tgcagcattt tctagctgta gatcaggaac agatgtgggg gaggaacagg 360
gaggcacatg ggaacaggga actccaccgg cctcagcaat agctgggacc cagctgccta 420
agtggtaaga agaacagtca gtggtgggga gaggagctgt ggctggaact tcgggaccaa 480
cactcanggt cagctgaaac aaattcctca ctggacaatg acatgangtc atttaagaaa 540
ngcaagccng ccaggtgcan tggcttcatg cctataattc caatgccttt gggtggncta 600
agtnggaaga ctgctttaag caatctgaaa cancccnggc caacataaca agancctatn 660
tttcnaaaaa aaaaaaaaaa 680

<210> 1186
<211> 618
<212> DNA
<213> Homo sapiens

<400> 1186
cgaggtacgc gggaattgaa tgtcaacttt agctgtgact tttctggcag ctagaataaa 60
agtaagatcg ttgtctgata gaactgaatg tctcagttta ttagaacaac aaaatactgt 120
aatctttctc aaaacctaca tggaacaaac tggaacaagt atttcatgaa aaccaaatga 180
aaaataagta aataaatgat ttcatcacca ctgtcaccaa aaacaaatga atttttgga 240
taggaaaaca tggctaagtt ggtaattgac tgagacattg gcctggtgtg ttatctgtgg 300
ttgtatttta ttaaacttat atttacagaa atggaaaaaa actaactttt catacagttt 360
ggtgtattca tagcaaaata tgaatagaaa tcacctctgg aatcttgatg aacaaggcct 420
ttagtggttc attggtgtag aatgaatatc aatttagaga aataggtcta taagtcagga 480
agtgatgcag aaatgtcata aggcttattc ataatcacaa catttttcaa atttttccac 540
gttaaatctg aaattttaat ttctttgata aaaaatctgg tatttttgat ttttttact 600
tttggtttga tttggaaa 618

<210> 1187
<211> 358
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 317, 320
<223> n = A,T,C or G

<400> 1187
cccttagcgt ggtcgcggcc gaggtacgcg ggaattgaat gtcaacttta gctgtgactt 60
ttctggcagc tagaataaaa gtaagatcgt tgtctgatag aactgaatgt ctcagtttat 120
tagaacaaca aaatactgta atctttctca aaacctacat ggaacaaact ggaacaagta 180
tttcatgaaa accaaatgaa aaataagtaa ataaatgatt tcatcaccac tgtcaccaaa 240
aacaaatgaa tttttggat aggaaaacat ggctaagttg gtaattgact gagacattgg 300
cctggtgtgt tatctgnggn tggattttat taaacttata tttacagaaa tggaaaaa 358

<210> 1188
<211> 660
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 623
<223> n = A,T,C or G

<400> 1188
nggagtcgac cccgcgtccg cttacatata atgcaactta tatgtaagtt tcatcaacac 60
agactgagta tataagttgg ctaaaagtaa caatacccat ctaacagtac aatgctgtca 120
gagacccagg ctctttctgg cttattgtaa ttcatttcct tagcatgttg ggttttatct 180
tcattctgtt cccttcacag ttgtggaatt cctgttgcag cttcattttt taaggacaca 240
aggcaggaaa ggggaagggc aactccacac gtgtctgtct tcttatcttg aattgcaaag 300
ctgtcccagt accttaccac ctacttgctt ctctagcaga ttctcttcca tattatttaa 360
gccactgggt cactccaggt tacaaaggta gcggtatatt gaaactttga aatttcagcc 420
tccatagtaa agaagggcaa gggagaaacg gtgtttgttt agtcagtcta aattgtcaaa 480
ggagatagcc agatatctct ttttgagaga taaacagaca ctcttcattt aaacatggta 540
taacttggct ttaaggcata tttctttaaa aatatattgt caaggactgc gaagagcctg 600
aagctacttt gccatacttt canggctagc agaagacagg agaatatttg gtcggggaaa 660

<210> 1189
<211> 219
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 4, 15, 19, 20, 21, 29, 31, 47, 48, 49, 51, 60, 61, 63, 73,
76, 79, 82, 86, 89, 95, 100
<223> n = A,T,C or G

<400> 1189
gatngttttt tgcanaatnn nccctttng ngggggtgag gggccgnnng nacctaaaan 60
ncnttgtttt aanacnatnt gntgcnacnt tttgncaaan ccaaagaaac ggcccttgtc 120
gcccacgaca cgtttgcgta aggcgcaaag ctggaaaagt gcaagtcctg tggctttcca 180
aaaggcagcg ggaggcattg gtgccggttt atttttaag 219

<210> 1190
<211> 445
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 2, 9, 28, 33, 66, 88, 89, 131, 139, 156, 160, 163, 201,
219, 222, 226, 240, 270, 302, 308, 317, 327, 365, 410, 411,
427, 432
<223> n = A,T,C or G

<400> 1190
nnagcggcng cccgggcagg tacccatnat gcncactgca ggcacaactc cagatgaagg 60
actatngaat atatgaatcg gcaacganna tggaggtggt cctgggggtg attattgcag 120
ccatgggggc nctgcccanc atctgagcca agggtnttgn aangagaatg gagaagcttt 180
tttcaggggg ctcttgggac natcagggcc cccccatgnt cncatntatg tcctcgcctn 240
aaaaaaaact tttaccgtta agcttttagn agggctaaca agacctcctt gccctttga 300
antaaacncc ttgaatntac ttgggcnaat aaccaaaggc ctttttcccc ccaagggctt 360
aaatngcccc aggaagaaaa cggttaaacc ttcccttggc ttcccttggn nggggcaacc 420
ttcgagnggg gnaggccatt tttta 445

<210> 1191
<211> 537
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 331, 513, 521, 536
<223> n = A,T,C or G

<400> 1191
cccttgcact gtgacaagct gcacgctcta gagtcgaccc agcatggata tgctgctgat 60
gaaatcactc actgcatacg gcctcaggac atcaaggagc gccgagcagt catcatcctc 120
aggaacttgc gatgttcttc accgaggaag ctttcgcagt agatcttata tgcgtcttcc 180
gtgcctgacg gacgcgcggc gaaccagccg ttgtcagtca tcactttcag accgccaata 240
gaagcaccgt tgcccggagc agcagtcagg cgcgcggtga tcgggtcacc tgccagggtg 300
ctggcgctca ccatttccgg agacagctta nacagcgccg ctttttgtgc ggaagtcgca 360
gctgcctgca aacggttgta gctcggcgca ccaaagcgtt ttgccagttc gttgtagtgt 420
tcctgcgggt tcttaccggt gacagcggtg atttccgccg ccagcagaca catgatgatg 480

ccgtctttgt cggggggaca cggcgtgccg tcnaaacgca ngaaggaagc ccctgnc 537

<210> 1192
<211> 579
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 129, 144, 169, 213, 222, 224, 226, 228, 229, 231, 233, 240, 244, 246, 253, 257, 264, 267, 270, 274, 283, 289, 305, 322, 328, 336, 339, 347, 383, 394, 406, 418, 432, 441, 446, 478, 488, 501, 506, 508, 514, 517, 553
<223> n = A,T,C or G

<400> 1192
ccctttcgag cggccgcccg ggcaggtacc actgggcttg cactgtgttc caggcggtag 60
ggtcttcaac agacactctg agaggtggga ttgtagggca tcagtttctg cagacacact 120
acaagtgtnt ggcaacacta ttgnggaggc taaagtaact ccatctcana tgctaatcca 180
caatgtttga tttctgagta accccaagtt ttnggaaggc cncnangnnc ncnacctttn 240
tctntngggg ccnctgnaat aaancanccn tgtnggccag ggnttgttnt tttacaattt 300
ggttnttaaa aggaaaaata cntggctngg gggccnccng ttgggcntca ttgcccctgg 360
tggatcccca agccaccttt tgnggaaggc caantgggca aggggnaggg atccaatntt 420
tggagggtca cngtaggttt naaagnaccc aggccctggg gcccaaacat tggggtgnaa 480
aaaccccnca attccttctt nacccnanaa aaanttnacc aaaaaaaaaa acccacgcct 540
tgggggccgt ttnggtgggc cgggggttgg cccccttgga 579

<210> 1193
<211> 401
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 321, 347
<223> n = A,T,C or G

<400> 1193
accactgggc ttgcactgng ttccaggcgg tagggtcttc aacagacact ctgagaggtg 60
ggattgtagg gcatcagttt ctgcagacac actacaagtg tctggcaaca ctattgtgga 120
ggctaaagta actccatctc agatgctaat ccacaatgtt gatttctgag taaccccagt 180
tttgggaagg cctccaagtt ttctacttta tctattgttc cttgtataag agcatgtggc 240
aggctgttct tacattgtta taaaaaaaat acagctgggc gcggtggctc atgcctgtga 300
tcccagcact ttgggaggca ntggagggag gatcatttga ggtcacnagt tcaagaccag 360
cctggccaac atggtgaaac cccatctctc caaaaataca a 401

<210> 1194
<211> 725
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 8, 37, 79, 134, 147, 161, 196, 208, 219, 223, 226, 234, 237, 247, 256, 264, 265, 275, 278, 283, 299, 304, 306, 308, 313, 322, 348, 350, 361, 364, 373, 385, 391, 423, 427, 432, 441, 450, 491, 555, 563, 567, 579, 596, 601, 632, 638
<223> n = A,T,C or G

<221> misc_feature
<222> 649, 660, 669, 707, 708
<223> n = A,T,C or G

<400> 1194
anaattcncc cttagcggcc gcccgggcag gtacaanact tggccgaaat ctgtcaggtc 60
agcccaactt tccttgtcng tgtcaaatgc tgtgcctctg tcctatcacc gggagaaaaa 120
aatgggttca ttgnggacgc cctgccnagt ttatttgttt ngtctcgggg tggggaattt 180
ataccctttt tgggtntcca aatctttnat atgaaaaang ggntcnccca ttcnttncaa 240
ccggacnttt tcctgngggc aatnnttaaa aaaanacnta atntaatggt tcctattgng 300
cctntncnat tgnattgccc tngggtcgcc ttggggtata attccctngn tggccaattt 360
nggnggacct tgntccttgg tgganagaac ntaattttgg ttggtggcca accaattatt 420
ttntttncct ancttaaaaa nttggccaan gaaaaggaat tttaaccaag gggttggggc 480
caaaatgggg naccaaaagg tttttttcctt ccttccttgg ccctggccat tcccaaacct 540
tggccaaaat tcctnaattg gtntttnaac caattggtna atttcccctt tttttnacct 600
naccttaatt tttttttttcc aaaaaaaccc anaaaggnaa tggttaatng gggcctttttn 660
attttttcna aaaaccaatc caattttttt aacctttttg gggaatnntt aattggggcc 720
ggggg 725

<210> 1195
<211> 525
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 324, 395, 447, 462
<223> n = A,T,C or G

<400> 1195
ggtacagctg ggatttgaac ttggcattct agctccagca tccatggcct taaccaccat 60
gctgtccttt ctcattttga ttgaataggc taatacattc cttgtcctta gaatagagtc 120
ttgcctgtag taagtgttca ggtggcagct ttagggctct cacttatccc attggactgg 180
gagtcaggct tgatgcttcc actaagtatc acacaacctt ggcaagattc ttgtgccccg 240
gtgaaatgaa agggttggac ttgggggcct caagtccagc ccgcactgca tcctgatctt 300
ctctctccat gccccatcac ctanacccat ccactgtgga ggacaagtgt gagaaggcct 360
gccgccccga ggaggagtgc cttgccctca acagnacctg ggctgtttc tgcagacagg 420
acctcaatag ttctgatgtc cacagtntgc agcctcagct anactgtggg cccaggggag 480
atcaaaggtg aaggtcgaca aatgttttgc tggggaggcc tgggg 525

<210> 1196
<211> 556
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 509, 530
<223> n = A,T,C or G

<400> 1196
ccctttcgag cggccgcccg ggcaggtact gtgtgacaat gacctggata tggaagcaga 60
agggagcttc taaggaccgg aagctgagag tctgtctcct gtcccggccc ggacactggg 120
gttcaggaag tttaagaaca gacactgtct tgacaggaac cagagcctca gtgtctgcag 180
gagttgctgg ctgtttcctg atgcagttgg agcagaatgg gatgtcctgg gacaacagaa 240
atgtttaccc atcttgacta gtgtggtcat ctgaagaatg gcctccaaag acatcctgag 300
aacctgggaa tgttgcatgg atgaaggaat ttgcaaaagt gattaagtta aggagcttga 360
aatttgtgga tcatgctggg ttaccccagt gagctctaaa tgtaatcaca tgtgtcttta 420
tgaaagggag gcagagggag atttgcagac agatgaggag gaagatgaga aaacaatgga 480

cacaagaaag aaaaggtgat gcagttcang gacccaacca ataaaatgan gtgacctcca 540
gatgcttgga gaaggg 556

<210> 1197
<211> 402
<212> DNA
<213> Homo sapiens

<400> 1197
cccttagcgt ggtcgcggcc gaggtacttt gctacacggc cgggggccat tgagactgcc 60
atggaagact tgaaaggtca cgtagctgag acttctggag agaccattca aggcttctgg 120
ctcttgacaa agatagacca ctggaacaat gagaaggaga gaattctact ggtcacagac 180
aagactctct tgatctgcaa atacgacttc atcatgctga gttgtgtgca gctgcagcgg 240
attcctctga gcgctgtcta tcgcatctgc ctgggcaagt tcaccttccc tgggatgtcc 300
ctggacaaga gacaaggaga aggccttagg atctactggg ggagtccgga ggagcagtct 360
cttctgtccc gctggaaccc atggtccact gaagttcctt at 402

<210> 1198
<211> 326
<212> DNA
<213> Homo sapiens

<400> 1198
ccctttcgag cggccgcccg ggcaggtacg cgggagtttt aatttttcca aagtatcata 60
tgaatggaat catgtgatat gtagcccatg aatcatgtat atgggttttt cacttagtag 120
agcacattta agattcatca ttgttgctat gtgaatcaat agctggttcc ttttatctct 180
ccgcagctcc tactgcactg agaagcacgt gttctccatt tccctggggg agaccattgt 240
attgggcagt ttggaacaaa acaccatgga ctgggaggct tacacaacag aaatttattt 300
cttgctgttc tagaggctgg gaagct 326

<210> 1199
<211> 407
<212> DNA
<213> Homo sapiens

<400> 1199
cccttagcgt ggtcgcggcc gaggtacttt gctacacggc cgggggccat tgagactgcc 60
atggaagact tgaaaggtca cgtagctgag acttctggag agaccattca aggcttctgg 120
ctcttgacaa agatagacca ctggaacaat gagaaggaga gaattctact ggtcacagac 180
aagactctct tgatctgcaa atacgacttc atcatgctga gttgtgtgca gctgcagcgg 240
attcctctga gcgctgtcta tcgcatctgc ctgggcaagt tcaccttccc tgggatgtcc 300
ctggacaaga gacaaggaga aggccttagg atctactggg ggagtccgga ggagcagtct 360
cttctgtccc gctggaaccc atggtccact gaagttcctt atgctac 407

<210> 1200
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 351
<223> n = A,T,C or G

<400> 1200
cccttagcgt ggtcgcggcc gaggtacgcg ggggagacac attcagaggt gagcccagag 60
cgggtaaagt ggactgggga gaacttcgga ggatgttcat gtccaggagc agccccacgc 120
cctgtatggt cggtgtctag agcctcacag caactaagac caacccagct ctcagaagaa 180
ggaatgtcaa aatgtcatgt tcaattttac attcagtgcc tggaatcttt tcttcacaat 240

tgaaatgaaa tgtgctgaag gaggtgaatc catgcattaa tcttcagctc acaaaggaaa 300
tctacataag aagcaaggaa cacgcaagag atctacagct ctgatctcca ngatagtgaa 360
atgaggtggt gaatgata 378

<210> 1201
<211> 374
<212> DNA
<213> Homo sapiens

<400> 1201
caggtaccct tcacaataca ttggcaaatt ctgaagctac aaagcacaag agaccagaaa 60
gccaagtaga aagctatgaa aaaccatttt taggaagcta gtattagagt tcaagaccca 120
gcagtgagga caagaggctt ttggtgactg tctggggatt tcatttggaa agtctggaga 180
ttggtgcctt ttaagaaggg acaaaactaa gggtaagtga actttggttc taggaatggc 240
aagatcagca agaagatcac cattgccaac tgtagccttt acacaatgtc atagcagccc 300
aaattcagtc agctattgaa ttaagtttat tgtctacttg ccaagctaaa gaatgtatga 360
atgctgtctt taga 374

<210> 1202
<211> 399
<212> DNA
<213> Homo sapiens

<400> 1202
acttgcttgg tctcccctcc ctggaaacgt tctcaaattg gtaagaaagg caattacagg 60
gctcagctcg tttgtttccc acctgtcaaa gcactgtcct tcattgtctg atgtccagtg 120
tctcaatacc attgtcttct tatttatctg gattctgggg ttgtttcagg tgggagggta 180
aatttagtcc ctgttactcc atcttgactg aaagcaaagt ccagttcttt agtttgttct 240
ccctatgaca gacctcaatc cctccgaatg atggttagat gacttcctat tggtttttct 300
attggcaaga tggtgaacca tgggtcacct tcctccatga caccctgact gagttacctc 360
taatatatgc agaattctgc tgtatgtaga aaaattaat 399

<210> 1203
<211> 392
<212> DNA
<213> Homo sapiens

<400> 1203
actgaaaaat ctcatgtcct gggaaacccc tcagtcctgg gcaaactgag accggtggtt 60
atcatacaaa gagaaaacca aataagacta aaattatgtc caaacacttt cattgtggct 120
aggaacacaa gttgaacacc ctaataagga acacgaataa taaaagcttg cattattgag 180
tgcttatatg aggtaagtat tatactatta tctccatttt aaagataagc aaactgagac 240
atagtaaggg taaataagtt agttagtgaa ggcaccagaa tttaaaccca gaaagtttgg 300
ttttagagca tacactacaa tcagcactgt atggaaagat atctaagagc agagacaggc 360
agagatggga gcactgggga agacatcatg ga 392

<210> 1204
<211> 381
<212> DNA
<213> Homo sapiens

<400> 1204
cccttagcgt ggtcgcggcc gaggtacctg acatggtgcc caaggactgg gagtagaagc 60
agaatcccat ccacctccac ctaatcatac ggagaaagga gacaggagct gagggagggc 120
agtgctatgt ccaagctgtc agcaagcagt aggcagagcc cagacccctg ctttcccatg 180
cccacccctc cccagttcag ggcaaggcca cctctccagg gcctttccct cccctagaga 240
ggaaactccc caagttcctc tgaccagaca ggagaatgaa ccaagagaag aaaattccac 300
ttaacacaca cacctggagc ctgaggctga aagctggaat cccagacttt gacactcaag 360
aaggcatctc cacacttttt c 381

<210> 1205
<211> 417
<212> DNA
<213> Homo sapiens

<400> 1205
ccctttcgag cggccgcccg ggcaggtaca gctaactgtg ctaggcaggg cagccctgtg 60
agttctactg ctgtcttggt tttacagagg gggaagtgag gcacagagaa gttaattaac 120
ctctgaagtg ttgcagtcta aggcacagag gcacagttcc aggcaaggtt catctgaatc 180
ttaagtcctc actctttgcc accatcctcc actgctgaga ccatccctgt gagtcctgcc 240
gctctcctcc cctggtccat attcactgct actcaatgag gccaaggaag ccaatggtcg 300
tgtccccaag aggatatctc tcccctcctg agaatctttc tcatacatct caattctgag 360
atacagattg agaagcacct cagcaaatcc actgcatgga aggcaaaaca accttga 417

<210> 1206
<211> 425
<212> DNA
<213> Homo sapiens

<400> 1206
ccctttcgag cggccgcccg ggcaggtaca gtcagggttt tgtcatgttg tttaggctgg 60
ttttgaaccc ccggactcaa gcaatccacc caccttggct tcccaaagtg ctgggattat 120
aggcatgagc cactgcaccc agccaattct ccaaatctca cagccaaact gcaactaaat 180
tccatctcaa acaaatattc aaatgcagaa gactcaccca tctaatcaag gcagttttaa 240
tatttagggg aaaaaaaatg cctggataaa actgtaaaac caagcatgat agaagagata 300
cttttaggaa tgggggaggg atgacaaaaa taaaacgaga aggtagataa gaatggaaag 360
aatactagaa gacagcctgc catgaggtta tattttacca ggggggtgat gggtgcaccc 420
aaatc 425

<210> 1207
<211> 383
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 235, 238, 245, 265, 273, 274, 290, 291, 292, 297, 318, 330,
347, 370
<223> n = A,T,C or G

<400> 1207
cccttagcgt ggtcgcggcc gaggtacaag gactacaggt gtaatcctcc gtgcctggcc 60
tgatgttttt tacattaata gagcttataa ctcataagaa ttatgttagt ctggtgtata 120
ttctgtttcc ttcctgctcc tggagaaaga caatcatttt ggccttgaat aatttcttag 180
aaatgcagat gtaaaattta aaatacacac acacacacac acacacacac acacnctntg 240
ttcanccaaa acactagcaa gcctntaaaa gtnngccaac tgacatttgn nnatatncct 300
caccactcta ttgcaaanat gaagaaacan gcttattgac attttanatg gctaaactaa 360
ctatgagatn tagggcttct cta 383

<210> 1208
<211> 487
<212> DNA
<213> Homo sapiens

<400> 1208
ccctttcgag cggccgcccg ggcaggtacg cgggagtttt aatttttcca aagtatcata 60
tgaatggaat catgtgatat gtagcccatg aatcatgtat atgggttttt cacttagtag 120
agcacattta agattcatca ttgttactat gtgaatcaat agctggttcc ttttatctct 180

ccgcagctcc tactgcactg agaagcacgt gttctccatt tccctggggg agaccattgt 240
attgggcagt ttggaacaaa acaccatgga ctgggaggct tacacaacag aaatttattt 300
cttgctgttc tagaggctgg gaagctcaag gtgctggctg catattcatt ctgaggcctc 360
ttctgatgtg caggcagctg ccttctgact tgtgctcaca ttggagagag ggagtcagct 420
ttggtgtctc ttcttgtaag gacactaacc ccattcacta gggccccacc ctcatgacct 480
aatcacc 487

<210> 1209
<211> 443
<212> DNA
<213> Homo sapiens

<400> 1209
ccctttcgag cggccgcccg ggcaggtacg cgggggttcg aggttcgttt acgcgccgct 60
tcgccgtgca ggtggtggcg aagcgctcct ccgaaaggtt tcggaagctg gtggtagctc 120
tgaagataac gctgcgttag ggcatactgc ggcggaggat ggaactccga ttgaaagcag 180
ttgctggagt ggagcacgaa tttcaacaag ccgcatgttg aagtgtgagg cgtgaaaggg 240
tatgtctgat atttgcttta aaatgctcca gcaaagaaat taagggatgg atgaagcaaa 300
agagccaggt atggtggctc atgcctctaa tctcagcact ttgggaggcc gaagcaggca 360
gatcacctga ggtcaggagt ttgagaccat cctgaccaac atggtgaaac tcgtctctac 420
tacaaacata aaagaattag ctg 443

<210> 1210
<211> 479
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 104, 107, 108, 110, 118, 128, 153, 164, 175, 176, 184, 189,
209, 215, 216, 233, 240, 242, 243, 267, 281, 304, 310, 313,
316, 325, 334, 335, 336, 344, 354, 358, 359, 363, 377, 381,
386, 388, 394, 396, 398, 399, 400, 401, 406, 410, 413
<223> n = A,T,C or G

<221> misc_feature
<222> 425, 426, 430, 441, 454, 467
<223> n = A,T,C or G

<400> 1210
atttgggcgg tcaacgcggg tggagaggcc catgtggacg ttcacgggat ccacttccgc 60
aaggacccct tggaaggccg ggtgggccga aaacttagga ctantgnncn tgaaactncc 120
aaatcctncc gttccaaacc cgtgaaggga ccnagatcct gtantcaaac ttganncggt 180
accnccggng gggttcccgg gccgtttanc attcnntccc gtgccgcacc cgncccgggn 240
gnnccaaaat tttggcaatt tctttcnctt gaaagtaaat nattgaagct tttttccaaa 300
cttncttgan tgnagncctt tgtgnataac cccnnntaac cttngggggc gggntaannc 360
acnacttaaa ggggcgngaa nttacnanac cccncntnnn nttggncccn ttntcttaat 420
ttgtnntttn ggaaaaaacc ngaaatgttg gaantccctt tgattcnaaa aaaaaaaa 479

<210> 1211
<211> 449
<212> DNA
<213> Homo sapiens

<400> 1211
ggtacactga gcctagaata tcttgtgggg tcaaaaggta aggcagtgct caaaaaacaa 60
cagtaaaatg gcaaaaatac atagaaccca acttgaaggg catcctaatg taaaatctag 120
aaaaatctga gcacaaaatg tattatagtc atgggttata accaatataa tgagaatcca 180
agagtccaga ctgattttta aaaaattgca ttttttcaat ataaaagaaa atatcttcct 240

tatagtaaca ttttaattga caaatgtaga agtaatgatg gaagtagaaa atcactgttt 300
ggcacacact gtagtaataa ctgtttcaga caagaattat ccacgaatgc taaaattagt 360
ttggtgaaag tatgatgaga aacaagatac ttacataggt ccaaagcatc tcctgacaag 420
atacttattc attcacagaa aaaaaaata 449

<210> 1212
<211> 399
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 309
<223> n = A,T,C or G

<400> 1212
ccctttcgag cggccgcccg ggcaggtacg cggggactcc tcacccagca tccataaaag 60
catgctgcac ctttggcaca gcgcgacttc cctggccctc cccctgcgga ccagtgaacc 120
tcgcccgagg gctcaataaa gaagattttt gccctctttt tctcacctct cagccttatt 180
gatccatggt gcccttccat tgcctttcat tggtgccgaa acccgggagg ggacacctcc 240
taagcccccc cagaggctca gggggactcc cctcctggtc ggatcagtcc tctccctcaa 300
tcaggtcang cttctcctcc acggccatct gtccatttcg tccggttact tgctgccagg 360
tcgcagttgc tgcagctact ccagtccaat tcggccgac 399

<210> 1213
<211> 380
<212> DNA
<213> Homo sapiens

<400> 1213
ccctttcgag cggccgcccg ggcaggtact ttgctacacg gccgggggcc attgagactg 60
ccatggaaga cttgaaaggt cacgtagctg agacttctgg agagaccatt caaggcttct 120
ggctcttgac aaagatagac cactggaaca atgagaagga gagaattcta ctggtcacag 180
acaagactct cttgatctgc aaatacgact tcatcatgct gagttgtgtg cagctgcagc 240
ggattcctct gagcgctgtc tatcgcatct gcctgggcaa gttcaccttc cctgggatgt 300
ccctggacaa gagacaagga gaaggcctta ggatctactg ggggagtccg gaggagcagt 360
ctcttctgtc ccgctggaac 380

<210> 1214
<211> 389
<212> DNA
<213> Homo sapiens

<400> 1214
ccctttcgag cggcgcccgg gcaggtacat cggtcccttg accattacac ccacggtggc 60
cctaattggc ctctctggtt tccaggcagc gggggagaga gccgggaagc actggggcat 120
tgccatgctg taagtggaaa catctcccct catcccacca ctgcggggca gcctttagga 180
acattcacag acttcaggag ataatgtttt tcaataataa gaatggtctg acagtttcaa 240
ctttatttgc ttcgtgctgg ggaatagttg aagggttttt gacccagagt ttgggaagtg 300
acatatagtt gacgtattac aaagacagac ttagcagcaa tatgaagagg gtggattgta 360
agtttttaag ctttggtagt ggggtaagg 389

<210> 1215
<211> 320
<212> DNA
<213> Homo sapiens

<400> 1215
actgaaaaat ctcatgtcct gggaaacccc tcagtcctgg gcaaactgag accggtggtt 60

atcatacaaa gagaaaacca aataagacta aaattatgtc caaacacttt cattgtggct 120
aggaacacaa gttgaacacc ctaataagga acacaaataa taaaagcttg cattattgag 180
tgcttatatg aggtaagtat tatactatta tctccatttt aaagataagc aaactgagac 240
atagtaaggg taaataagtt agttagtgaa ggcaccagaa tttaaaccca gaaagtttgg 300
ttttagagca tacactacaa 320

<210> 1216
<211> 354
<212> DNA
<213> Homo sapiens

<400> 1216
actttgctac acggccgggg gccattgaga ctgccatgga agacttgaaa ggtcacgtag 60
ctgagacttc tggagagacc attcaaggct tctggctctt gacaaagata gaccactgga 120
acaatgagaa ggagagaatt ctactggtca cagacaagac tctcttgatc tgcaaatacg 180
acttcaccat gctgagttgt gtgcagctgc agcggattcc tctgagcgct gtctatcgca 240
tctgcctggg caagttcacc ttccctggga tgtccctgga caagagacaa ggagaaggcc 300
ttaggatcta ctgggggagt ccggaggagc agtctcttct gtcccgctgg aacc 354

<210> 1217
<211> 388
<212> DNA
<213> Homo sapiens

<400> 1217
cccttagcgt ggtcgcggcc gaggtacttt gctacacggc cgggggccat tgagactgcc 60
atggaagact tgaaaggtca cgtagctgag acttctggag agaccattca aggcttctgg 120
ctcttgacaa agatagacca ctggaacaat gagaaggaga gaattctact ggtcacagac 180
aagactctct tgatctgcaa atacgacttc atcatgctga gttgtgtgca gctgcagcgg 240
attcctctga gcgctgtcta tcgcatctgc ctgggcaagt tcaccttccc tgggatgtcc 300
ctggacaaga gacaaggaga aggccttagg atctactggg ggagtccgga ggagcagtct 360
cttctgtccc gctggaaccc atggtcca 388

<210> 1218
<211> 427
<212> DNA
<213> Homo sapiens

<400> 1218
ccctttcgag cggccgcccg ggcaggtaca gtgccctcat cgaagctcct aaaacttcct 60
gaaaaaaatg aagctttaac gtccagcttc cactgcttaa actgagcaca ggacgtgcac 120
ttggatagta aaccaggtgt ctcctcaaag ccctaatata ttcagcatct ctatcaaagg 180
cgcctttcat ttgacttctt tgttctggca aagactctct ccttttaaat tttctttttt 240
tgtccttatt cattgcaaaa tattgggcca gtttacccct attgggttca tgcagatgga 300
tgttttgcaa atgtaatttt gtgtcctgga ctaaagactg caaccagcct cggagtaaac 360
gaaaatgccc actgcggata tctgacacct tccattcaca agcatctaca aatgagtcga 420
tttccaa 427

<210> 1219
<211> 356
<212> DNA
<213> Homo sapiens

<400> 1219
acatgggcac ctggctgtgg ctcatctact accatattct ttgttcttct agatccttct 60
tggcttccat cttggcaact ccaaaggcat ggtggggaaa acagatgcag agatagatgc 120
ctatttctcc tgcagtctct ttcagcatag caattaggca agttatcaat aagagtatat 180
aatctataac ttatagtcca cataaggctt cactcaattt gaaaaattgc cagttctgtc 240
aaatatgcta acactccaat aaggtattta tgacacagaa tctttatttt tccatcagta 300

tgtgctgaag ctacagatgt tgaaacacga actaatcttg tggctgataa atgaat 356

<210> 1220
<211> 356
<212> DNA
<213> Homo sapiens

<400> 1220
actttgctac acggccgggg gccattgaga ctgccatgga agacttgaaa ggtcacgtag 60
ctgagacttc tggagagacc attcaaggct tctggctctt gacaaagata gaccactgga 120
acaatgagaa ggagagaatt ctactggtca cagacaagac tctcttgatc tgcaaatacg 180
acttcatcat gctgagttgt gtgcagctgc agcggattcc tctgagcgct gtctatcgca 240
tctgcctggg caagttcacc ttccctggga tgtccctgga caagagacga ggagaaggcc 300
ttaggatcta cttggggagt ccggaggagc agtctcttct gtcccgctgg aaccca 356

<210> 1221
<211> 364
<212> DNA
<213> Homo sapiens

<400> 1221
ggtacaggtc atggtgagca ggtgttctga gggaagacaa aggaaaagca gagggagtgt 60
tgacaattct gagcttccat atggcagaca ttcggggcct gttggcatgg tcctcagagc 120
agcaacaaca gcatcaattg aggttcatta aaatgcagaa tcgcaggttc atgtggacct 180
actgaatcag aacctgcatt ctaacaacag ttttcagtgg ttcttccgca cattaaagtt 240
tgaaaagcac tggtctggag gaggaggctc tacaaaaggg ttgggtattg aggagccgaa 300
aagacaacct ggaactgaga ttcccaggga tgacctgaaa acaagcattt caaaagctca 360
gaaa 364

<210> 1222
<211> 355
<212> DNA
<213> Homo sapiens

<400> 1222
cccttagcgg ccgcccgggc aggtacagta tcctatatta ttcctatttt aagatttaaa 60
gaaaaccctg aggtttagat aagcaaattg ctcaaagtca cgcaatgcca tagtagtgtt 120
ggagctatga ttttccagaa tctaagctct tagtcctggg aagtgcctag tgcccaaaga 180
agaagactgg aataaaataa ggctgaatgg tgtgtaagaa ccaaataaca aaagccttgc 240
agacaatttt aaaggctgtg aatattagtc taagaacaat aacaagcaaa aaaaaaaaaa 300
aaaaaagttt taactggaga tagtaacatg tgttttcttt tctcttcttt tcttt 355

<210> 1223
<211> 247
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 5, 16, 21, 32, 34, 42, 43, 48, 55, 80, 82, 88, 90, 99,
110, 129, 134, 161, 167, 172, 179, 180, 236
<223> n = A,T,C or G

<400> 1223
ntgtnatgga tatctncaga nggggccctt ancntgatcc cnncccangt acacngcagg 60
tatctggctc caccacactn angaaccngn aggaggcang gagtggatan tgtgtcaagg 120
atgactganc cctncttctg tgtaaaacaa gttacaccta nattcanaat anatgctgnn 180
gcaacataaa attataaaaa ttcactgtaa ttcacatctt ggtgcctggg caccantttt 240
taaatgt 247

<210> 1224
<211> 181
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 41, 43, 63, 68, 69, 73, 83, 85, 90, 127, 133, 142, 155
<223> n = A,T,C or G

<400> 1224
cggcntttgg gcccaaccag cccgctcgag cggccgccag ngngatggtt tttgcagagg 60
ggnaaacnnc gcncccccgg ccnangtacn tagagcctga gttgctccac aggaatccag 120
gaactgngca cangaaaagg anctcagctg gtggngtggg aagatggaaa ccaacttctc 180
c 181

<210> 1225
<211> 414
<212> DNA
<213> Homo sapiens

<400> 1225
ccctttcgag cggccgcccg ggcaggtaca aatattttaa atatggaaat cctaatgcag 60
ggggtgggct gagagagatt ttatagaata tatgtatgta tgtccaaaac agaagatacg 120
gaataaaaag catgaaagaa agaagaggtt ccatagcaag gtatcagcag ttcctcaggg 180
atgaggatgg cggaggcatc aaggaatctc aagatgctac caaaatagga gcggaaacat 240
ggaaagatgg aagcacatgt ataattcaag tctgttcagc aacttgtgtg cctccagcct 300
aaaagtaaac cacagtcatg ttctaaaggt tccgattcat acacatgtct gcttgttctt 360
cagttttggt tttgctactg ggctttgatt ctttaatccc cacctgctga atga 414

<210> 1226
<211> 430
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 377
<223> n = A,T,C or G

<400> 1226
cccttagcgt ggtcgcggcc gaggtacgcg ggaattgaat gtcaacttta gctgtgactt 60
ttctggcagc tagaataaaa gtaagatcgt tgtctgatag aactgaatgt ctcagtttat 120
tagaacaaca aaatactgta atctttctca aaacctacat ggaacaaact ggaacaagta 180
tttcatgaaa accaaatgaa aaataagtaa ataaatgatt tcatcaccac tgtcaccaaa 240
aacaaatgaa ttttttggat aggaaaacat ggctaagttg gtaattgact gagacattgg 300
cctggtgtgt tatctgtggt tgtattttat taaacttata tttacagaaa tggaaaaaaa 360
ctaacttttc atacagnttg gtgtattcat agcaaaatat gaatagaaat cacctctgga 420
atcttgatga 430

<210> 1227
<211> 400
<212> DNA
<213> Homo sapiens

<400> 1227
ccctttcgag cggccgcccg ggcaggtact gaaaaatctc atgtcctggg aaacccctca 60
gtcctgggca aactgagacc ggtggttatc atacaaagag aaaaccaaat aagactaaaa 120

ttatgtccaa acactttcat tgtggctagg aacacaagtt gaacacccta ataaggaaca 180
cgaataataa aagcttgcat tattgagtgc ttatatgagg taagtattat actattatct 240
ccattttaaa gataagcaaa ctgagacata gtaagggtaa ataagttagt tagtgaaggc 300
accagaattt aaacccagaa agtttggttt tagagcatac actacaatca gcactgtatg 360
gaaagatatc taagagcaga gacaggcaga gatgggagca 400

<210> 1228
<211> 432
<212> DNA
<213> Homo sapiens

<400> 1228
cccttagcgt ggtcgcggcc gaggtacttt actcaccctt cctctgacag aaaaggatga 60
agtcaagggc ctggtagagg caccactaag aaaggcatct gaaaggacca aagagagtga 120
ccagcaagca tttttgcaa ggctgaggag ctgacagctt ccatgaaagg ctggaccacc 180
cagtggtgaa aagcatcatc tgggttacct tgtgctgcca taaaacacac cacagacttg 240
gtgacttaaa ccacagatat ttatcttctc acaatcctgg aggctggaag tctgcaatca 300
cggtgccagc atggtcaggt tctggtgagg gcctctttcc ttctcactgt gtgctctttc 360
ttgtgcatgg agagagagag catgaacaag ccctctactg tccctcttag aagggcacta 420
atcccataat aa 432

<210> 1229
<211> 405
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 124, 266
<223> n = A,T,C or G

<400> 1229
ccctttcgag cggccgcccg ggcaggtact ttgctacacg gccgggggcc attgagactg 60
ccatggaaga cttgaaaggt cacgtagctg agacttctgg agagaccatt caaggcttct 120
ggcncttgac aaagatagac cactggaaca atgagaagga gagaattcta ctggtcacag 180
acaagactct cttgatctgc aaatacgact tcatcatgct gagttgtgtg cagctgcagc 240
ggattcctct gagcgctgtc tatcgnatct gctgggcaaa gttcaccttc cctgggatgt 300
ccctggacaa gagacaagga gaaggcctta ggatctactt ggggagtccg gaggagcagt 360
ctcttctgtc ccgctggaac ccatggtcca ctgaagttcc ttatg 405

<210> 1230
<211> 403
<212> DNA
<213> Homo sapiens

<400> 1230
ccctttcgag cggccgcccg ggcaggtact ttgctacacg gccgggggcc attgagactg 60
ccatggaaga cttgaaaggt cacgtagctg agacttctgg agagaccatt caaggcttct 120
ggctcttgac aaagatagac cactggaaca atgagaagga gagaattcta ctggtcacag 180
acaagactct cttgatctgc aaatacgact tcatcatgct gagttgtgtg cagctgcagc 240
ggattcctct gagcgctgtc tatcgcatct gtctgggcaa gttcaccttc cctgggatgt 300
ccctggacaa gagacaagga gaaggcctta ggatctactt ggggagtccg gaggagcagt 360
ctcttctgtc ccgctggaac ccatggtcca ctgaagttcc tta 403

<210> 1231
<211> 344
<212> DNA
<213> Homo sapiens

<400> 1231
ccccttagcgt ggtcgcggcc gaggtacgcg ggggcagttc ttgagttcca catgcagagc 60
agatgcgaca gctagaagtg agtggggccc agaccctggc ccaggaagat ccactaaagg 120
aggccatcct tccgccttct tctgcaggag tcaggatgga aaggcagatg taaagtccct 180
catggcgaaa tataacacgg ggggcaaccc gacagaggat gtctcagtca atagccgacc 240
cttcagagtc acagggccaa actcatcttc aggaatacaa gcaagaaaga acttattcaa 300
caaccaagga aatgccagcc ctcctgcagg acccagcaat gtac 344

<210> 1232
<211> 411
<212> DNA
<213> Homo sapiens

<400> 1232
ccccttagcgt ggtcgcggcc gaggtactgt tgcagtgagc tcaagtgttg ggtgtatcag 60
ctcaaaacac catgtgatgc caatcatctc cacaggagca atttgtttac cttttttttct 120
gatgctttac taacttcatc ttttagattt aaatcattag tagatcctag aggagccagt 180
ttcagaaaat atagattcta gttcagcacc acccgtagtt gtgcattgaa ataattatca 240
ttatgattat gtatcagagc ttctggtttt ctcattcttt attcatttat tcaacaacca 300
cgtgacaaac actggaatta caggatgaag atgagataat ccgctccttg gcagtgttat 360
actattatat aacctgaaaa aacaaacagg taattttcac acaaagtaat a 411

<210> 1233
<211> 425
<212> DNA
<213> Homo sapiens

<400> 1233
ccctttcgag cggccgcccg ggcaggtacc atgtgcctga gatggaggtg tttgtggttg 60
ggcaggctgg ctttgctaat tttaaatcca ccaaaatata tcattttggc attgacaggt 120
gtattagtct gttctcaggc tcctataagg acatacctga gactgggtga tttataaaga 180
aaagaggttt aactgactca cagttccgca tggctgggga ggcctcagca aatttacaat 240
catggtggaa ggggaagcaa acacatcctt cttcacatga tggcagcaaa aggaagtgct 300
gagaaaaagg ggaaaagccc cttagaaaac catcagatcc catgagaact cactatgatg 360
agaacagcat ggaggtaacc acccatgatt ccattacctg ccaccgggtg cgtcccacaa 420
catgt 425

<210> 1234
<211> 358
<212> DNA
<213> Homo sapiens

<400> 1234
ggtactgggt gggtgagtgg gctcaaggcc tcctgagtag cctgggtggc gtgggcaatg 60
atggtaacag aggcaatgca aagcttgtct ccttcttgag ctctgtgctc ttgagtcggc 120
agatgttgta agggactgtg tagatcaacc tttaggacag gaggtagcac ctaaaagtga 180
gaaccagctg tggtggtggc aatagagttt atgcttgacc tttgttaatc gggagaagtt 240
cttgggcatt tcagatgatg ggtagggcca tggaactctc agtagtcctg gtcccatgat 300
ctgcctctga aacaggaggg gtgggatgtg gtagtgggat ccactttgtt ctcgtgct 358

<210> 1235
<211> 157
<212> DNA
<213> Homo sapiens

<400> 1235
ccctttcgag cggccgcccg ggcaggtacg cggggacact ttgctgccga aacgaagcca 60
gacaacagat ttccatcagc aggatgtggg ggctcaaggt tctgctgcta cctgtggtga 120
gctttgctct gtacctcggc cgcgaccacg ctaaggg 157

<210> 1236
<211> 702
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 158, 210, 236, 259, 307, 313, 348, 353, 376, 379, 397, 402,
405, 409, 415, 418, 422, 434, 455, 461, 476, 477, 494, 500,
509, 526, 566, 602, 620, 621, 624, 633, 636, 664, 677, 678,
687, 693
<223> n = A,T,C or G

<400> 1236
ccctttcgag cggccgcccg ggcaggtaca ccttgttggg agagatgggg gcagcccaag 60
aaagctcctc agcggactga agagggagta agatgggctg aggggagctt gcagttcatg 120
ctgcattagg aagagggaag ctcttcagtc caagtgcngc ctgcaggggt gggaaaagca 180
accaacaccg gacacccgtt cccacccttn aacccccccca ctgggcacag gggtcnccac 240
caaattctgg ggtcaaaang aaaattaggg cggggggggcc ccctttgtgg ggtccattcc 300
aaaaagncgg atncccaatg ggttcttttg gaggggcttg gaggggantt cantgttgcc 360
aagggcccca tttagnggnt ggaaaaaaat tggaaangaa gncanttgna aaccnagngg 420
gnaggggtgg aagncaagcc cccccccattc ccaangattg nccccggggg ggggganntaa 480
aaggaaaggc ttgnggccan ccaagttcng gccttgggcc ggttanggggg aaaaaaaact 540
tggccttccc cccccatttt acccgntttg aaaaaggccc ttggggattc ttggggaaag 600
tntcccttgg aaagcccatn ncanttttttg ccncangggg aaagaagggg gccttgccgt 660
ttgnccgggg ccccacnnag gggaagnact tancccccttt tc 702

<210> 1237
<211> 330
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 107
<223> n = A,T,C or G

<400> 1237
ccttagcgtg gtcgcggccc gaggtactga tagtctgtct cgtttacgaa gcccatctgt 60
tttggaagtt agagaaaagg gctatgaacg attaaaagaa gaactcncaa aagctcagag 120
ggaactgaag ttaaaagatg aagaatgtga gaggctttca aaagtgcgag atcaacttgg 180
acaggaattg gaagaactca cagctagtct atttgaggaa gctcataaaa tggtgagaga 240
agcaaatatc aagcaggcaa cagcagaaaa acagctaaaa gaagcacaag gaaaaattga 300
tgtacctgcc cgggcggccg ctcgaaaggg 330

<210> 1238
<211> 227
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 89, 91, 102, 107, 114, 116, 124, 131, 135, 138, 142, 150,
156, 165, 167, 173, 186, 208, 227
<223> n = A,T,C or G

<400> 1238
ngggccctta gcgtggtcgc ggccgaggta cttttttttt tttttttttt tttttttttt 60

tttcttttt tttttttttt tttttttcna nccaacaatg tnttttntta tgtntncggg 120
tttnaaaatt ntttnttnaa tntctccatn cccagncaaa gggangngtg ttncttaaca 180
tactgnaaat tgcctaactt aatcattncc taaaaaaaaa aaaattn 227

<210> 1239
<211> 323
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1
<223> n = A,T,C or G

<400> 1239
nggggccctt agcgtggtcg cggccgaggt actaggatta caggcgtgaa gcagcatgcc 60
acgcctatag tgatatcttt aagtaagcct ctcctatctt ttttgagcag tttttcaaag 120
caacaggcac cttattaaat tagaaagttg atgtgcttgg cctaatgcct actaatgagg 180
taaagaacta aagaacctct gtgatttcaa tgaagtccct tcagatgtta tgggctactt 240
gttactgaca agtatggtag gaactgtagg tcaagctgtc ataggcaaat agatcttgct 300
gaagaggaag aattattggc taa 323

<210> 1240
<211> 376
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 27, 28, 29, 42, 50, 58, 59, 60, 62, 64, 75, 89, 94, 95,
97, 98, 104, 105, 106, 111, 119, 122, 123, 131, 132, 134,
139, 141, 151, 157, 158, 170, 172, 173, 182, 188, 192, 193,
210, 215, 220, 227, 236, 237, 241, 246, 250, 255, 258
<223> n = A,T,C or G

<221> misc_feature
<222> 263, 265, 277, 285, 288, 290, 294, 296, 300, 301, 304, 306,
308, 309, 311, 316, 317, 323, 326, 328, 331, 332, 335, 337,
353, 357, 360, 362, 364, 370
<223> n = A,T,C or G

<400> 1240
actttttttt tttttttttt tttttnnnng aaaaaaaaaa anttttttttn gggggccnnn 60
tntngggggg ggggnaaaaa aaaaaaagnt tttnntnntg gggnnnaaaa ncttaaaanc 120
cnnggggggg nngnaaaang naaaaatttt nttttttnnaa ccaaagggcn annaaagggc 180
cnggggcnta annggggaaa aggggccccn aaaanccctn gggggggnggg gggggnngcc 240
nagggnaaan ggttnttnaa aangnccttt ttttccnagg ggcanggntn tttncnaccn 300
nggncntnnc naaaannaag ggnttngncc nnaancnttt tttttttttt ttngaanccn 360
tncnaaaaan tttttt 376

<210> 1241
<211> 412
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 392
<223> n = A,T,C or G

<400> 1241
ccctttcgag cggccgcccg ggcaggtact ttaattagag acgagccagt gcagaatagc 60
tggacaggca gtgcgtccac ccagcgagca gactgcccag gggggcagt ctccacctca 120
ctgatgcaac tggtgaaggg acagacaggg gcgtggatac atttcttcct tccccaaaac 180
aaaatgggag gatgcgtgtg ggttggtggg ttacagagaa agattcaaac atcattctgg 240
cctgatcagt attctggcag tttaccatta tacatacaga aaaagaacag aaagtgtgtt 300
aaagaatcca agttttaagg ggaacagaaa acaaagtcat ctgcactatg gaagcctatt 360
tttttctttc tttgtttccc ctcctttttc tntctcctcc tcctttttc tt 412

<210> 1242
<211> 691
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 461, 501, 639, 650, 662
<223> n = A,T,C or G

<400> 1242
agtcgacccc gcgtccgcca gatttgataa aactgcatga ttccttagga ggaagtggaa 60
ccagatggac aaatagagcc ctcgtgtgat tgtttcctgc aggaacacca gattgaacaa 120
ctattcatgc aagaaaacac cttcgtagga gccaaaacaa ttagagtgat cacagtgcct 180
gatctgaaca taatattaag gagagaggaa ttgaagagga taggaaagac ggtcttgcat 240
tgcatgcacc atccctccct caaacccaag cagcagagca tggagagaaa atctgtgctt 300
aagggagaga gagcaaagca agagtgggac tcggtactgt cgtatcacag tggaacatag 360
caaagggcag aattctgctg gcacccagga caggagcctt cagaccagcc ctggcccaca 420
gggaaattct gtgccccatt gggaggaacc caagtcacag ncagcttcac cactgactaa 480
ctgaagtggc ctgggaccca naataaattt gagtagcagt catgccacaa ggaccacagt 540
cctagggcaa gccctgctgc tttgctgatc tcaaaagcac tggactttga gtgcaactca 600
atgcaacacc agagcccaag agactgcctg catcacctnc tccaattcan gcagtacagc 660
tncaggagag actccttcca cttgagggaa a 691

<210> 1243
<211> 386
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 95, 108, 109, 115, 116, 117, 118, 137, 138, 139, 140, 141,
142, 143, 149, 150, 151, 156, 157, 161, 165, 167, 168, 169,
182, 187, 188, 189, 192, 193, 194, 196, 198, 212, 214, 216,
217, 218, 220, 222, 223, 228, 229, 232, 233, 234, 235
<223> n = A,T,C or G

<221> misc_feature
<222> 236, 237, 239, 240, 241, 242, 245, 246, 255, 268, 269, 271,
272, 276, 278, 280, 282, 285, 287, 290, 292, 299, 301, 303,
316, 317, 328, 330, 341, 343, 346, 347, 351, 352, 357, 358,
361, 364, 365, 366, 367, 372, 373, 381
<223> n = A,T,C or G

<400> 1243
ggtacttttt tttttttttt tttttttttt aaattttttt tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttttttt ttttnggggg gggggggnnt ttttnnnnaa 120
aaaaaaaaaa aaaaaannnn nnngggggnn nccccnncca ntttnannng gggggggggg 180
gnccccnnnt tnnnantntt ttttttaaaa anancnnncn tnnttttnng gnnnnnncnn 240

nnttnnaaaa aaaangcccc cccccccnna nnaaananan gntgngnaan anccccccnc 300
ngnaaaaaaa accccnnttt tttaaaanan gggggggggg ngnttnnccc nnctccnnga 360
ngannnnggc cnnccccccc naaaaa 386

<210> 1244
<211> 428
<212> DNA
<213> Homo sapiens

<400> 1244
cccttagcgt ggtcgcggcc gaggtacatt tctgttaaaa agaaggttgt ctttccagcc 60
ttatgttttg tagtttaatt tgttcacatt cattataatc cattatttaa tacatttttc 120
ttccatttga tcatattact tgctgatagg aaggactgag ttcattttca gcgtgtctgg 180
cttttccatt tctgtggcct gggaaggtgg gtggctacat catcatccat ggtctctgaa 240
atatcctgtg ttaccaaggc ctgcttgttc caccaaactg ctccataggc agttgtgaca 300
cccagaaaga tgctgatatg gtttggctgt gtccccaccc aaatctcatc ttgaattgta 360
gttcccataa tccccaggtg tctgggaggg gcccagtggg aggtaattga gacatggggg 420
cgggtttt 428

<210> 1245
<211> 388
<212> DNA
<213> Homo sapiens

<400> 1245
gcactgtgac aagctgcacg ctctagagtc gacccagcaa tctccctgct gctccgtcgt 60
ccgccaggac gtgaagcatt cccgggcgac gttttctacc tccactctcg tctgctggag 120
cgtgctgcac gtgttaacgc cgaatacgtt gaagccttca ccaaaggtga agtgaaaggg 180
aaaaccggtt ctctgaccgc actgccgatt atcgaaactc aggcgggtga cgtttctgcg 240
ttcgttccga ccaacgtaat ctccattacc gatggtcaga tcttcctgga aaccaacctg 300
ttcaacgccg gtattcgtcc tgcggttaac ccgggtattt ccgtatcccg tgttggtggt 360
gcagcacaga ccaagatcat ggaaaaaa 388

<210> 1246
<211> 273
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 128, 129, 132, 133, 140, 141, 145, 147, 148, 161, 165,
169, 171, 172, 180, 184, 186, 191, 203, 219, 221, 225, 232,
241, 255, 262, 263
<223> n = A,T,C or G

<400> 1246
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt ttnatttttt 60
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 120
tttttttnna anngaaaccn ntttnannaa aaaaaaaact ncccnaaana nntttaaacn 180
ttananccaa naaaaaaacc cancatttaa aaatttttnc ntttngcccc cnaaaaaagg 240
naaaaaaaaa ggggncaaag gnnccccatt ttt 273

<210> 1247
<211> 449
<212> DNA
<213> Homo sapiens

<400> 1247
acagtaagga gcagacaaga tggttctggc caagtggaaa gcccatttgc ataataagat 60

tagggtgggg cgaccagcct tcccacacac aatgtaaatg tcacacctga tccaatcaat 120
ctgtgggccc tacataaatc agacagtgcc ttctcaagct tgcctgtaga atccagtgca 180
ctctgccacc agcaggtctt tccttttcag atacctctct ctggcaagag acagacagag 240
acggctgctc tcctctcccc tttcttctgc ttattaaact ttccgctcct taacccattc 300
catgtgtgcg tgtccatgtt gttaatcttc tcagcacaaa atgaccaacc ccaggtattt 360
accccagaca atgatgccac ttcacttgta ggttcctcca atccactttt ctcttcatga 420
aattagtgag aacaaaacca cccttttct 449

<210> 1248
<211> 413
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 257
<223> n = A,T,C or G

<400> 1248
ccctttcgag cggccgcccg ggcaggtaca tctcctggcc ctcaggtgtc atggaattta 60
ggtagtagca gcctgaggct ggggtcctgg gcacctgact gaacatctcg gcagatttcc 120
tattgccacc tcagtctgcc tgtggctgtt gccgtctgtc tccagtctca gtcaaagagc 180
aaggcaccca gcccaggaca gctcaacaga cccagcgatt tttaaaaaga aagaggagtg 240
ccaaagccac aactcanaat tccaaccccc gggccctcac gtgacctcgg gaaccaatga 300
gaggaagaga ggaaaatggg aacgtttgca gtcagcccta agccccgacc agaggcagtt 360
ccagccgcca gggtccctca cacaacgctg aaagcaaaat acacgtattt gac 413

<210> 1249
<211> 399
<212> DNA
<213> Homo sapiens

<400> 1249
ccctttcgag cggccgcccg ggcaggtact ctagcctggg tgacagaacg agactctgtc 60
tccaaaaaca aacaaacaaa acacagaaat actgggaata aaagtatttt tgaaacatgt 120
agatcctctt ttattaagaa agaggcagac atctcacact taggaaaatc tcaaccctta 180
aagagagaaa tgaaatagaa attttacaaa tcaaaacaaa agtaaaaaaa atcaaaaata 240
acagattttt atcaaagaaa ttaaaatttc agatttaacg tggaaaatat ctgaaaaatg 300
ttgtgattat gaataagcct tatgacattt ctgcatcact tcctgactta tagacctatt 360
tctctaaatt gatattcatt ctacaccaat gaaccacta 399

<210> 1250
<211> 392
<212> DNA
<213> Homo sapiens

<400> 1250
cccttagcgt ggtcgcggcc gaggtacctg ggtgatggcc atactgcgtg ccgccatagc 60
tcaagccatg tgcctgaggc tgtgcatgag ggagagaaag aatgtccact cccaaaagaa 120
ctgattcagg catgaacaga accattgcac atcctcagga ggttctagca aacctgcaca 180
tccatgtctg cacttagaca acataaacag agtgagaatg ccttcccaga gcacagcaga 240
agttcaactg gcaacgacca ggagaatttt cagctcatcc tttacagaaa atgtaacttc 300
catggagagg acaggagaat cagacaaaga caagcggaga ctctttcttt tctgcacgtg 360
ctggtacctg cccgggcggc cgctcgaaag gg 392

<210> 1251
<211> 385
<212> DNA
<213> Homo sapiens

<400> 1251
acacatgtcc aaggtcaggt cctgggtggt aaaggtaaat acaaattgga agggcactgt 60
gtgagccaaa atgagtcaga ttagtcatga ttcatttcca gtttgggttt tgggtggtct 120
tggagaatgt tgtaagcact gcttcattga taggttgatt gagccagact ttactcagca 180
gcctggaaaa ggagagatgg gctctgggtt ctacctttgc tcactggtaa gttgctaaga 240
tttcagcttt gccctcaaac cctgaagtag tccttcattc acacagtggg atcactcgaa 300
aatgtcagat ggggaagtcc ataggttgtt actttaaaga aaatagaaaa aatgctggaa 360
aaggtttctt caattttaat accca 385

<210> 1252
<211> 338
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 38, 57, 66, 73, 74, 78, 80, 81, 82, 83, 84, 85, 86, 106, 107, 119, 120, 136, 140, 146, 147, 150, 151, 152, 153, 157, 159, 169, 170, 171, 172, 180, 181, 183, 184, 192, 198, 210, 211, 212, 213, 218, 219, 226, 227, 234, 235, 236, 237
<223> n = A,T,C or G

<221> misc_feature
<222> 238, 248, 262, 278, 280, 281, 283, 295, 296, 297, 298, 299, 300, 301, 311, 312, 313, 315, 316, 322
<223> n = A,T,C or G

<400> 1252
actttttttt tttttttttt tttttttttt tttttttntt tttttttttt ttttttnaaa 60
aaaaantttt ttnngggnan nnnnnntttt tttttttttt tttttnnaaa aggggggggnn 120
aaaaaaaaaa aaaaanaaan gggggnnaan nnnaaangnt ttttttttnn nnaaaaaaan 180
ngnntttttt tnaaaaantt tttttaaaan nnnaaaannt aaaaannttt tttnnnnnga 240
aaaaaaantt tttttttttt tngggggggg aaaaaaanan nanttttttt ttttnnnnnn 300
naaaaaaaaa nnntnnaaaa anggggtttt tttttaaa 338

<210> 1253
<211> 428
<212> DNA
<213> Homo sapiens

<400> 1253
ccctttcgag cggccgcccg ggcaggtacg cgggggccga gagtctgtgc gaaggtccgt 60
ggacagactg ctttgcctgt tgttgctctt cggaggcggc gatccccgaa ggcgagctga 120
aatacggctg caggctacaa tttgcagccg accattatgg atgacaagga gccgaagagg 180
tggcccaccc tcagggaccg cttgtgctcg gatggcttct tatttcccca ataccccatt 240
aaaccgtatc atctgaaggg gatccacaga gctgtcttct atcgtgatct ggaggaactg 300
aagttcgttc tgctcacgcg ttatgacatc aataagagag acaggaagga aaggaccgcc 360
ctacatttgg cctgtgccac tggccaaccg gaaatggtac ctcggccgcg accacgctaa 420
gggcgaat 428

<210> 1254
<211> 392
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 54, 108, 130, 135, 138, 141, 142, 143, 149, 153, 157,

159, 165, 176, 179, 184, 190, 191, 193, 196, 197, 202, 204,
206, 226, 227, 239, 241, 242, 243, 249, 256, 261, 263, 269,
270, 272, 274, 298, 301, 305, 306, 307, 324, 334, 335
<223> n = A,T,C or G

<221> misc_feature
<222> 336, 337, 339, 340, 341, 343, 344, 347, 350, 353, 355, 374,
375, 376, 377
<223> n = A,T,C or G

<400> 1254
ccctttcgag cggccgcccg ggcaggtact ttattttttt tttttttttt ttnnattttt 60
tttttttttt tttttttttt tttttttttt tttttttttt ttttttttnta tttttttttt 120
tttttttttan ggggnttnaa nnnaaaaant tantttngng ttttnaaaaa aggggnaant 180
tttnaaaaan ngnggnnaaa gntntnaaaa aaaaaataaa attttnnggg gggggggngg 240
nnngtttana aaaaantttt ntnaaaaann tntnaaaaaa attttttttt tttttttncc 300
naaannntaa aaataatatt tttnaaaaaa aaannnngnn nannctnttn ttnanaaaaa 360
aaaaaaaaaa aaannnngaa aaaaaatatt tt 392

<210> 1255
<211> 265
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 26, 41, 104, 106, 111, 133, 199
<223> n = A,T,C or G

<400> 1255
ggtaccattg gtggccaatt gatttnatgg ggagggaagg naacgcctgg ctcggagcag 60
tagcctctga ggtgtccctg gccagtgtcc ttccacctgt ccanangcat nggggaacat 120
tttcaccaac ctnttcaagg gcctttttgg caaaaaagaa atgcgcatcc tcatggtggg 180
cctggatgct gcagggaana ccacgatcct ctacaagctt aagctgggtg agatcgtgac 240
caccattccc accataggct tcaac 265

<210> 1256
<211> 404
<212> DNA
<213> Homo sapiens

<400> 1256
ccctttcgag cggccgcccg ggcaggtaca gctggtccag gatagcctgc gagtcctcct 60
actgctactc cagacttgac atcatatgaa tcatactggg gagaatagtt ctgaggacca 120
gtagggcatg attcacagat tccagggggg ccaggagaac caggggaccc tggttgtcct 180
ggaataccag ggtcaccatt tctcccagga ataccaggag ggccctaaaa aagagataaa 240
aataaattaa atagtgaaaa atcctggtga ttcacaatca ttatcagatt gttgtttctc 300
tactttataa tattaggaaa caatataagt aatatatttt ctttataaca catacttttt 360
aatcaaaatc ttgtgaataa tttaagtata atgtattcct ttgt 404

<210> 1257
<211> 198
<212> DNA
<213> Homo sapiens

<400> 1257
ccctttcgag cggccgcccg ggcaggtacg cggggagtgc cgccgggact cttggcgggt 60
gaaggtgtgt gtcagctttt gcgtcactcg agccctgggc gctgcttgct aaagagccga 120
gcacgcgggt ctgtcatcat gtcgcgttac gggcggtacc tcggccgcga ccacgctaag 180

ggcgaattcc agcacact 198

<210> 1258
<211> 524
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 81, 82, 90, 93, 94, 97, 98, 99, 101, 110, 112, 113, 115, 116, 118, 120, 122, 127, 164, 167, 169, 186, 188, 193, 195, 197, 199, 200, 211, 213, 214, 217, 224, 225, 227, 237, 242, 243, 250, 252, 254, 255, 257, 259, 261, 275, 276, 277
<223> n = A,T,C or G

<221> misc_feature
<222> 283, 284, 285, 287, 289, 300, 309, 314, 315, 317, 319, 321, 325, 328, 340, 345, 346, 347, 353, 362, 363, 367, 374, 375, 376, 377, 378, 379, 386, 388, 405, 406, 407, 408, 412, 415, 417, 418, 419, 420, 421, 427, 429, 434, 435, 436, 437
<223> n = A,T,C or G

<221> misc_feature
<222> 438, 440, 441, 443, 444, 446, 448, 449, 450, 452, 455, 460, 465, 466, 467, 470, 471, 472, 492, 493, 496, 505, 506, 508, 509, 511, 521
<223> n = A,T,C or G

<400> 1258
acttttttttt ttttttttt ttttttttt ttttttttt ttttttttt ttttttttt 60
ttttttttt ttttttttt nntttaaaan ttnnttnnna naaaaaattn tnnanntntn 120
tnaaaanaag aaagcttttt ttaaaaaaaa aaaaaaaaat ttanccngnc tcacaaatgt 180
aagtananaa atntnangnn taaaaaaaaa ntnnccnctc cttnntnttt aaggggnaaa 240
anncctttn cntnngngng naaaaaaaaa aattnnnttt ttnnngnana ctggccggcn 300
atttctaang gaanntngnt ntatnctnaa aaaaaatagn tattnnnggg aanaaaaaaa 360
annaaanaaa attnnnnnng ggaacnanaa aaaaaaaaaa aaaannnncc cnccncnnnn 420
naaaaanant tatnnnnncn nannananm anganaaaan atttnnnttn nnaaaaaaaa 480
aaaaaaaaaa annttngggg ggggnngnna naaaaaaaaa naaa 524

<210> 1259
<211> 407
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 96, 99, 103, 109, 113, 114, 116, 120, 123, 124, 128, 129, 131, 137, 140, 142, 147, 148, 152, 153, 154, 163, 166, 167, 168, 169, 173, 175, 176, 177, 181, 185, 186, 188, 190, 192, 193, 199, 201, 203, 204, 206, 213, 215, 217, 218, 221
<223> n = A,T,C or G

<221> misc_feature
<222> 229, 232, 233, 234, 237, 241, 250, 251, 252, 258, 259, 260, 266, 274, 277, 280, 282, 284, 287, 288, 290, 291, 299, 302, 307, 310, 313, 314, 316, 319, 320, 330, 332, 333, 335, 343, 347, 348, 358, 359, 366, 367, 372, 398
<223> n = A,T,C or G

<400> 1259
cccttcgag cggccgcccg ggcaggtacc cctcaccctc cctcctccaa tctccccatg 60
gcaaaaaaat gcaccttttt tttttttttt ttttgnaang ggntttttnt ttnntncccn 120
aannggggnng ncggggnccn antttanntt annngaagcc ccnccnnnng ggntnnnccc 180
ntttnnncngn cnnaacccnc ngnngngggg ggnanannggg ncccccccnc cnnnccnggg 240
naattttttn nnttttttnnn aaaaangggg tttnaanggn cntnccnngn ngggttttnt 300
tnccccnccn tannanttnn ccccccttggn cnncnaaagg ggngggnnta aagggctnna 360
cccccnnccc cnaccaatgg cccttttttt tttttttnaa aaaaaaa 407

<210> 1260
<211> 317
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 96, 97, 98, 103,
104, 124, 125, 126, 127, 133, 134, 135, 138, 142, 143, 151,
152, 153, 154, 156, 161, 163, 167, 168, 169, 170, 173, 176,
177, 178, 180, 181, 182, 183, 184, 185, 200, 208, 213
<223> n = A,T,C or G

<221> misc_feature
<222> 214, 215, 217, 220, 223, 225, 231, 233, 245, 248, 249, 250,
257, 260, 263, 266, 270, 273, 276, 277, 278, 293, 298, 303,
304
<223> n = A,T,C or G

<400> 1260
ggtacttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 60
tttttttttt tttttttttt ttnnnnnnnn nnaaannntt ttnnaaaaaa aaaaaaaaaa 120
aaannnnttt ttnnnatngc anngggggggg nnnnanaaaa ntntttnnnn ttnaannncn 180
nnnnnaaaaa aaaaaaaaan agggggngg aannntnttn ctnanaaaaa nancttttttt 240
ttttngcnnn aaaaaanaan acnccncccn ccnctnnngg gggggggggg ggngaaanac 300
ccnnggggggg aaaattt 317

<210> 1261
<211> 324
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 97, 101, 110, 112, 113, 125, 129, 133, 134, 135, 136,
137, 138, 140, 156, 157, 158, 159, 166, 167, 176, 177, 178,
179, 180, 181, 182, 191, 192, 204, 213, 216, 224, 228, 232,
233, 238, 239, 240, 247, 251, 253, 254, 256, 258, 259
<223> n = A,T,C or G

<221> misc_feature
<222> 260, 263, 264, 266, 267, 281, 282, 283, 284, 286, 287, 300,
303, 309, 317
<223> n = A,T,C or G

<400> 1261
cccttcgag cggncgcccg ggcaggtact tttttttttt tttttttttt tttttttttt 60
tttttttttt tttttttttt tttttttttt ttttttntaa naaaaaaaan anntttttttt 120
ttttncgcng agnnnnnntn aaaaaaaaaa aaaaannnnt tttttnnggg gggggnnnnn 180
nnaaaaaaaa nntttttttt tttngggggg ggnacnaaaa aaangggngg annaaaannn 240

tttttntct ngnnanannn aanncnntaa aaaaaaaaat nnnncnncac ttttttgggn 300
gantgtaang ggggggnggg gggg 324

<210> 1262
<211> 236
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 112, 117, 118, 119, 120, 128, 133, 134, 135, 146, 148, 149,
157, 158, 163, 180, 181, 182, 183, 189, 190, 197, 198, 199,
200, 202, 203, 212, 215, 216, 217
<223> n = A,T,C or G

<400> 1262
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttttt ttttggggtt 60
tttttttttt tttttttttt tttttttttt tttttttttt ttttaaaaaa anccccnnnn 120
tttttttntg ggnnnaaaaa aaaaananne ccccccnngg ggngggggggg ggggttttn 180
nnncccctnn tgtttcnnnn anncccccccc cnccnnnttt tttttttttt tttttt 236

<210> 1263
<211> 284
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 71, 124, 162, 185, 211, 244
<223> n = A,T,C or G

<400> 1263
nggggccctt agcgtggtcg cggccgaggt actttttttt tttttttttt tttttctcaa 60
gcgacgctca nacaggcgta gccccgggag gaacccgggg ccgcaagtgc cgttcgaagt 120
gtcnatgatc aatgtgtcct gcaattcaca ttaattctcg gngctagctg cgttcttcat 180
cgacncacga gccgagtgat ccaccgctaa nagtcgcccg cgtacctgcc cgggcggccg 240
ctcnaaaggg cgaattccag cacactggcc ggccgttact agtg 284

<210> 1264
<211> 727
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 253, 444, 556, 570, 576, 622, 677, 678, 693, 701, 708, 721
<223> n = A,T,C or G

<400> 1264
cccttagcgt ggtcgcggcc gaggtacttc actgcggact tgacttcttg agcaagaagg 60
ctggcactgt tcattaagag aatcacagag atgaatctca caatgcagga aaactaggtc 120
ataatgtcca gcaaacatga acatctgaac tgagaaccgg ctttccgagg actgcccatt 180
ctcctccacg tggatggtgg aatcacgctg atttgagcag ctgtttctga tgatgaaaat 240
acttcacaag gtnagccttg tcttcagtgg ggggtggcat tagcagttcc tcaacaccca 300
gggttaaaac ccggggaggt gtccccttgt tccaagatgg cacccacatt accagcaccg 360
ggacctcaac agacagtttc caactgcatc ccctttcgta aagggattcc ggtggttagt 420
tttctgggtc tttggggaaa gaanggccc attccctgga ccaaattgaa aacttctttc 480
cattttcccc cggtcccacc accttggacc gttttccaag gggaaacct ttaccaaatt 540
gggggccttg gcaaangggc caagcctttn gggaanggct tggacctttt ccattgttcc 600

ccaggtgggg ggtaaggggc cncattttgg gaaaaggttt ggaatggttt ggaagggaat 660
ggggtggtcc ttcttgnntg aatggaaaaa ttncatttgg nccccaangg gagaaggggg 720
nggtttt 727

<210> 1265
<211> 159
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 46
<223> n = A,T,C or G

<400> 1265
cccttagcgt ggtcgcggcc gaggtacgcg ggaacgtggt ccctanaaca agaggcttaa 60
aaccgggctt tcacccaacc tgctccctct gatcctccat cagggccaga tcttccacgt 120
ctccatctca gtacctgccc gggcggccgc tcgaaaggg 159

<210> 1266
<211> 321
<212> DNA
<213> Homo sapiens

<400> 1266
ccctttcgag cggccgcccg ggcaggtaca tctgccagtg ctcagaaggt ccaagtctca 60
atccagaccc cagcaggtca agttctccga tgatgtcatt gacaatggga actatgacat 120
tgaaatccgg cagcctccga tgagtgaaag gactcggaga cgcgcctaca attttgaaga 180
gaggggatcc aggtctcatc accaccgccg ccggagaagt agaaagtccc gctccgacaa 240
tgccctgaat cttgttacag aaagaaaata ctctcccaag gacagactgc ggctgtacct 300
cggccgcgac cacgctaagg g 321

<210> 1267
<211> 536
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 339, 398, 409, 438, 448, 458
<223> n = A,T,C or G

<400> 1267
attcgccctt agcgtggtcg cggccgaggt acgcgggggg agagcagagc gcggcggctg 60
gaagctgcta agtcagagcc gcgatgttcc ggattgaggg cctcgcgccg aagctggacc 120
cggaggagat gaaacggaag atgcgcgagg atgtgatctc ctccatacgg aactttctca 180
tctacgtggc cctcctgcga gtcactccat ttatcttaaa ggaaattggg acagccatat 240
gaaggacagg gacatcacat tatgaaatgc accgattatt gaaggagccc tgggttacag 300
gtttccgact cctctctgcc aaggtgaata aggcccagna aagggtggta aaggagactc 360
tttgaatggg accattaaaa atttcttgct tgttaaanaa acaagtttng gctctggtaa 420
cctggacctt tcaaaagnct aaaaatanta aaaacttntt tttggggaag gtattgaaaa 480
cgattgtcct cgtggatctg gtgtaccctg ccccgggcgg gccgcttcga aaggg 536

<210> 1268
<211> 364
<212> DNA
<213> Homo sapiens

<220>

<221> misc_feature
<222> 179
<223> n = A,T,C or G

<400> 1268
ggtacacatg ccagctctgg caactaccct atgctggctc taccaccaaa gacccggaac 60
caaagttggg tgcacagttt gctccctgaa tggtgggctc aggcacggct ctgacttcat 120
ttctcaggca ggcaacagac acgtttacct tacgctctgg ctcctgctgt tccttgcanc 180
aagggggaat tcgatgggac ctaaaaatca tctggaacat acacagacat ggatatcttc 240
tctctcacat aaacacaaag acctttcccc atatttccgt gcaggccaag cctctgtatt 300
ttccagcatg acactgtatt tgcgtattgt agtggatggg acattgggga tctcctagtc 360
ctgt 364

<210> 1269
<211> 395
<212> DNA
<213> Homo sapiens

<400> 1269
cccttcgagc ggccgcccgg gcaggtacgc gggtaatttg gttggccaat tagaaatgcc 60
tttttcagtt ggtgtattga aagctttcct ttaacatttt cacctgctca ttgtgattcc 120
tccttttagt ctaatatctt tccaggtcat acttgttttt aatcattaaa tattttcttc 180
ctggttttgg agactaagct gataaacttt ttttaaaact taagcattgt cattgctatt 240
ttttttaatt tgactttcct aggagtttaa gatcagccat gaccaacatg gtgaaacccc 300
atctctatta aatacacaaa ataaaaatga gccaccgtgc ctggccagaa taggtttttt 360
ctttcaactt gatcagtaga aaatggacat caagt 395

<210> 1270
<211> 408
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 170, 310, 327, 328, 345, 362, 363, 372, 387, 390
<223> n = A,T,C or G

<400> 1270
cccttagcgt ggtcgcggcc gaggtacgat gttgtgtggg gagaggtgat atggtcactg 60
tagggagacg gcacatgctc actatcataa tggcttccat ggggtgagga gtgtgagtga 120
tcactgctgt attgctgtcg tgaggtgatt aggtcatctg ccttgctcan cagctgggca 180
ggatgtggcc tctgggaggc atggctgccg tcatgaagtc catgaaactg tcctgggaag 240
gctctctccc caagtgcact ctggctgatc agagtggcag aaataaaggc caacgttggc 300
tggggcagan aactgcccct ggatctnncc tgccaggggt gttangtggg tttgacaagg 360
tnncagaacg gncaggttct tatccanctn tagactagaa aaattatc 408

<210> 1271
<211> 318
<212> DNA
<213> Homo sapiens

<400> 1271
ccctttcgag cggccgcccg ggcaggtacg gggtttggt tgactgccag ccctggaggg 60
ttgtcttctg cccacacctt tgaccatcac ttagccagag ctggtcttat ctcttgacct 120
ggctcggtta agaaaagtct tcattcctcc tcctgggga cagtaagggc catgatgact 180
ccctttccgg gtaactttag ctgtaaaaga gctgtgctct gtaagagaga tggtggctct 240
cagcttgcta agcaagtccc ttcccagcaa gggcaaggag aagtcgggca tgtacctcgg 300
ccgcgaccac gctaaggg 318

<210> 1272
<211> 365
<212> DNA
<213> Homo sapiens

<400> 1272
ggtacttccc ataatcccca catgttgtgg gacgcacccg gtggcaggta atggaatcat 60
gggtggttac ctccatgctg ttctcatcat agtgagttct catgggatct gatggttttc 120
taaggggctt ttccccttttt tctcagcact tccttttgct gccatcatgt gaagaaggat 180
atgtttgctt ccccttccac catgattgta aatttgctga ggcctcccca gccatgcgga 240
actgtgagtc agttaaacct cttttcttta taaatcaccc agtctcaggt atgtccttat 300
aggagcctga gaacagacta atacacctgt caatgccaaa atgatatatt ttggtggatt 360
taaaa 365

<210> 1273
<211> 981
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 19, 37, 39, 43, 45, 72, 78, 262, 512, 532, 541, 767, 800,
840, 862, 868, 956
<223> n = A,T,C or G

<400> 1273
actattaggg ggaagttcng tacacacagg gccgtantng ggngncccct tcttaagaat 60
ggccattggc cntcggangc cgggcccggc ccaagttggt ggaatgggga atattcttgc 120
caagaaattc cgccccccttt aagccgggcc ccgccccggg gccaagggta cccggcgggc 180
cccgtttaaa aacattgttg ttcaacttgg gggccaaggc cgggtggccc ctcttaaata 240
acttgggtgg aatgccttaa gnaagggttg aatggttttt ttgggttaaa acaagggccg 300
ggggggtaaa agaatttggc ccggaagttt cccttttta acttttttt tttaaaccct 360
tttcccttt aattggaagc catttggccc ttggttggtt tgggggtttt ggaccaagtt 420
ggaagggggg ttaaattaaa ttggaccttt tggttttggg gtttggaatt tggttaagga 480
attaatttg gggggccttg gtttaaaatt tnggtccaag gttttccaag tnggttttt 540
naaattcctt gaaccgccaa gggcctttta attggccggg gaaggggaag aaaaattggt 600
tttttttcca attggtttta accttttaat taacttaaaa ccattttaag gtttccttt 660
tccttaatta agggggggttg gaattaagga attttggggt tccccaaaat tttgggggt 720
tggttggaag gggaaagttt tccaaagttt taattaattg gtttttnggg gggaattttt 780
tttttttaag gggttaaagn ttggggggtt ggttttggaa agccctttttg gaaaacccgn 840
ccttttttcc ttttaaaatt tnggggtngg ggccttggcc tttttttttaa ggggcccctt 900
acctttaatt ggggggttgg ttttaaaaaa ttttttttt taaccttctt ccttcnttaa 960
ccaaaagggg tttttttttt t 981

<210> 1274
<211> 400
<212> DNA
<213> Homo sapiens

<400> 1274
ccctttcgag cggccgcccg ggcaggtacg cgggacacat tcagaggtga gcccagagcg 60
ggtaaagtgg actggggaga acttcggagg atgttcatgt ccaggagcag ccccacgccc 120
tgtatggtcg gtgtctagag cctcacagca actaagacca acccagctct cagaagaagg 180
aatgtcaaaa tgtcatgttc aattttacat tcagtgcctg gaatcttttc ttcacaattg 240
aaatgaaatg tgctgaagga ggtgaatcca tgcattaatc ttcagctcac aaaggaaata 300
ctacataaga agcaagacca cagactcaag acggacataa ttggattttt tttgccatgg 360
cctggaaaga aaggtacctc ggccgcgacc acgctaaggg 400

<210> 1275

<211> 541
<212> DNA
<213> Homo sapiens

<400> 1275
ccctttcgag cggccgcccg ggcaggtacc tattaacatc actcagctgc tgtgaaatag 60
gcttacaggc aacatggagt gtcaattacc caatgtttaa agtcgatcat acagattgga 120
ctacaatctc tatggctcat aaagtcttta aaggattgac agatgattta tctcatatgt 180
agacaatgat tctcagcagt taactagcgc aacttgataa tatcaattgc ttgagaaaat 240
cagataattg cttgagaaaa ttaggacatt gcttgaggaa gttaggtagt taaataaatt 300
acttttttta aagaatagtt taatattttg gcaagtagac tttaaaatag gttggtaata 360
ttttaaaggc tacttttaaa gaagtagcaa tataacatgt ttaattatga aaaataatgt 420
tggaaacaat tcaattttct atcagatcat tcacaaatac agaaatacca tctcaataat 480
tagaagaagt agcagcaatt tctgtcattt ttatgccagt tactcttagt ccatttattt 540
g 541

<210> 1276
<211> 422
<212> DNA
<213> Homo sapiens

<400> 1276
ccctttcgag cggccgcccg ggcaggtacg gggaaaagtg atgacagcgt gactatgtag 60
agttatataa actatgtaaa aagtcataaa aatgtgagtg gagtgaattt gtcacctcga 120
ttttcttttc ccttaaccac tctactttcc ttctctctcc atctgtaatg ctatgcagta 180
acttcagttt tatgcttcca tccatggcag atatcatcaa gcaatctaac acttattctt 240
gttgaggttc cagtaagcct tgagtccaag ctgccactac tacagggggt tatccacatg 300
gaaagtgcag attgttacta ctcacctcat tccgtaagca gaagcaaatt ctgtatagat 360
gaaggactta actatgacag ccaatacttt aaaatattta gaaaataaat atttttatta 420
tc 422

<210> 1277
<211> 430
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 387
<223> n = A,T,C or G

<400> 1277
cccttagcgt ggtcgcggcc gaggtacgcg gggaattgct aatgggaatg gggtttattt 60
tgaggtgata gaaatattga tgaaattaga aattggcggt gattgctaat gggaatgggg 120
tttattttga ggtgatagaa atattgatga aattagaaat tggcggtgat tgctaatggg 180
aatggggttt attttgaggt gatagaaata ttgatgaaat tagaaattgg cggtgattgc 240
taatgggaat ggtgtttatt ttgaggtgat agaaatattg atgaaattag aaattggcgg 300
tgattgctaa tgggaatggg gtttattttg aggtgataga aatattgatg aaattagaaa 360
ttggcggtga ttgctaatgg gaatggngtt tattttgagg tgatagaaat attgatgaaa 420
ttagaaattg 430

<210> 1278
<211> 506
<212> DNA
<213> Homo sapiens

<400> 1278
ccctttcgac ggccgcccgg gcaggtacgc ggggagagac aaaaacagaa gaggggaaac 60
atgtttccta ctgacgacag gtgattacac gtgtgcttct gatggaggga tcaggaaagg 120

atatgaaaaa tcccgaagct taaacaacat agcgggcttg gcaggcaatg ctctgaggct 180
ctctccagta acatcaccct acaactctcc ttgtcctctg aggcgctctc gatctcccat 240
cccatctatc ttgtaaacca aacaaccaaa ctgcatcagt cggctaaatt gtattaattc 300
aagtgctgtt taccccataa tggaaataat taaatgtaga gttactccag gctccattaa 360
tacagtataa atcttgcatg atactacaat ttgaagtcag aaatgccact tgggtagcta 420
atgaatctta cccaggcttt aaagattgtc taaagtagtg ctaaaatccc tcctattaat 480
tgccctgata tccttttgca ataaaa 506

<210> 1279
<211> 351
<212> DNA
<213> Homo sapiens

<400> 1279
cccttagcgt ggtcgcggcc cgaggtacat gcctgtaatc ccagctactg ggaggctga 60
ggcaggagaa ttgcttgaac ctgggaggca gaggttttag tgagctgaga tcccgccatt 120
gcactccatc cagcctaggt gacagagcga gcgagactcc atctcaaaaa agagaaagaa 180
gaagaagaga gctcaacaat gcagccaggg aagatttcct gtaggagtct tgagacagga 240
gaaagagaga tggaagagaa agaaagcgca tgctgcctct gaaaaaatgg agagatcacc 300
cccgcgtacc tgcccgggcg gccgctcgaa agggcgaatt ccagcacact g 351

<210> 1280
<211> 382
<212> DNA
<213> Homo sapiens

<400> 1280
ccctttcgag cggccgcccg ggcaggtact tccgatcagc ctcctacaaa ccctctgctt 60
tcagtcttca agccattctc cacacagaag ctgggaagag ctctcaaagg caatgccaac 120
catgttccta ccctgctgaa aacctcccaa tgagttagga tgttaggctc tcaaagcact 180
taacagccta actccatccc atgacctcgg gccctccttg ctcttttccc acctttccct 240
cattgcttct tacctcgggt ccagccacaa tggtttcctt tctgtttcct gaacaactca 300
gacctttcc agtcttagga cttttgctgt tgttctttct gcctgaagcc ttctttctgc 360
cagctctcgg catgcttttc tt 382

<210> 1281
<211> 424
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 395
<223> n = A,T,C or G

<400> 1281
cccttagcgt ggtcgcggcc gaggtactag cagaattcag ctcctgcagt gataggactg 60
aggtccctgt ttccttgttg gctatcaact ggggtttgct ctgggctcct ggatactgct 120
gcattccttg ccaggtagtc ctctccatct ccaagccagc aacagcacat aaacccctct 180
cctgcttcga atctcttacc tcctcagctt ctgacctcta aatacaggtt taaagggctc 240
tggcaaatgg gtcaagccca ctgacaataa attcccttct cgaagtcaac tgtgccatat 300
attaaacata atcacaggag tataagccac cctagtcaca cagcccatgg attatgcaat 360
atatactggt agtgggtcta ctggaggtca tttanaattc tacctaccac aatttacaag 420
gaaa 424

<210> 1282
<211> 383
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 319, 335, 338
<223> n = A,T,C or G

<400> 1282
ccctttcgag cggccgcccg ggcaggtaca aggttggtag gaggaagaga agaaatgatt 60
ggctcccaga ggcttcatgg gctcccaatt catgattctt tctctgtggc taatttttgt 120
taagtataag aattccagga atctcttagg aattgtggag actgctttct cctgaaatat 180
aaaacatctg ctcttggtct gtttggcgct ccactgtctg aggggaaaac agggaaaaag 240
aggtaatata aaacagacat tgtttcagac aataaatccc cctttactca ttaatgagaa 300
aataaattta gggccagang tgtcagactt ttcangangc ctctttgtct tttcttttct 360
ttttttaat aatttaaaaa aag 383

<210> 1283
<211> 406
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 337
<223> n = A,T,C or G

<400> 1283
ccctttcgag cggccgcccg ggcaggtacc acctatgaag tattctgcct aaagatatta 60
aacctgaagc ttatcaaatc tgtaaatctg actacgactt gactgaaaat ttagtggcaa 120
aggaatatag taaatgacat cacaaggata tagcatccaa acccagaaag cggatattct 180
ttaggataaa tgacccagtt tcctcaacaa tgaaatggcc tggaatagaa aaaagaggga 240
gaacttaaaa taacatacca accaaatata gcacatggat cctgttttaa tatggattca 300
gaaatccaat tctgaaatga catttttaa aaatcangag gccgggcgtg atggctcatg 360
cctgtaatcc cagcactttg ggaggctgag gtgggcggat cacaag 406

<210> 1284
<211> 305
<212> DNA
<213> Homo sapiens

<400> 1284
accaaaactt gtccgaaaat tatagctaaa gttttctcac ttttcctgtc tttctcacta 60
ctgggaaggc attaggaatg gaattatctg agcatgcaga attgtgtttt atttgcaata 120
ggtgagtatt aacaaaaatg cataggtgtg catctataaa atttatcata tacactcagt 180
atagacaaat acttatgaaa cattagaaaa tcagctgaat accttgttaa tacacagtat 240
cattcagcat aattgagttt ctaaatttta ataagttctc aggcgatgct gataccagtg 300
gtacc 305

<210> 1285
<211> 401
<212> DNA
<213> Homo sapiens

<400> 1285
ccctttcgag cggccgcccg ggcaggtacg cggggacaca ttcagaggtg agcccagagg 60
gggtaaagtg gactggggag aacttcggag gatgttcatg tccaggagca gccccacgcc 120
ctgtatggtc ggtgtctaga gcctcacagc aactaagacc aacccagctc tcagaagaag 180
gaatgtcaaa atgtcatgtt caattttaca ttcagtgcct ggaatctttt cttcacaatt 240
gaaatgaaat gtgctgaagg aggtgaatcc atgcattaat cttcagctca caaaggaaat 300
actacataag aagcaagacc acagactcaa gacggacata attggatttt ttttgccatg 360

gcctggaaag aaaggtacct cggccgcgac cacgctaagg g 401

<210> 1286
<211> 317
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 276, 283, 287
<223> n = A,T,C or G

<400> 1286
cccttagcgt ggtcgcggcc gaggtacaga acccaggaga tccccagtcc ctgcgatgta 60
ggatcccgga cccccggcgc taagtggaga tgcgccagct gccccacact ggagaaggct 120
caaagaaaac aaatcccacc cttcgccgca ggtggattct cctcccctag agctactgtc 180
cagttgctac tggcctccag caaaacaaac atcagtatgg acggaaggag caggacgcag 240
ggtggggagg gtcacctttc tgggagaaaa gaaagnccgc ggnctancgt acctgcccgg 300
gcggccgctc gaaaggg 317

<210> 1287
<211> 388
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 67, 68, 75, 76, 84, 89, 90, 109, 114, 116, 117, 118, 119, 125, 129, 130, 132, 137, 138, 139, 140, 144, 147, 150, 154, 163, 165, 166, 172, 173, 174, 175, 185, 191, 196, 200, 201, 216, 217, 218, 219, 220, 234, 235, 236, 239, 240
<223> n = A,T,C or G

<221> misc_feature
<222> 248, 249, 256, 258, 262, 266, 273, 277, 280, 291, 292, 294, 306, 308, 309, 311, 313, 322, 326, 329, 330, 331, 334, 343, 355, 356, 357, 359, 361, 363, 365, 367, 368, 370, 371, 373, 374, 375, 379
<223> n = A,T,C or G

<400> 1287
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttttt tttnaatttt 60
tttttttnntt ttttnnaaaa aaanttttnn tttaaaaaaa aaaaaaaant tttncnnnna 120
aaaanaaann tnaaaannnn tttnccnggn tttnaaaaaa aantnntttt tnnnnaaaaa 180
aaaanttttt ngtttncccn naaaaaaaaa aaaaannnnn ttttttttaa aacnnnttnn 240
ttttttttnnc ccccancnaa antttnaaaa aangggnttn ccaaaaaaaa nngnttttta 300
aaaatngnna nanttttttt tncccnaann nccnttttttt aantttttttt aaaannnang 360
ntncntnntn ncnnntttna aaaaaaaa 388

<210> 1288
<211> 635
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 428, 458, 482, 506, 516, 518, 612
<223> n = A,T,C or G

<400> 1288
ccctttcgag cggccgcccg ggcaggtacc atagatcact ggtaggggaa acaaaagcaa 60
aagcaaaaca aaacaaaaac aatagatcct gatgacacag gtctatttat acaaacgatt 120
gaagcaaaaa tcaattgtaa ctgtatcagt ttatgcaggg agaaatgaca attctattgt 180
catgtggact aggacaatat tggtgacagg atggggtttg gaaagcttca aaataattgg 240
gtgttatgtt taaacagctc ataggtgccc ccatttacca catacccgta ttgggcccg 300
ccaatttatt tttctttcca ggtttctgg ttgccaaaaa atgcctggaa tttccaaccc 360
aaccccccctt caccaattat ttggtaccct cgggcccgcg acccaccgcc taaggggccg 420
aaatttcnca gccacacctt gggcggcccg ttacttangt ggatccgagc tcggtaccca 480
anctttgggc gttaattcca tggtcnatta agcctngntt tcccttgtgg tggaaaaatt 540
ggttattccc gctcaccaaa ttttccccac caccaaacat taccgaagcc cgggaaaagc 600
cattaaaaag gntgttaaaa aggccctggg gggtg 635

<210> 1289
<211> 398
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 378, 384
<223> n = A,T,C or G

<400> 1289
ccctttcgag cggccgcccg ggcaggtacc tttctttcca ggccatggca aaaaaatcca 60
attatgcccg tcttgagtct gtggtcttgc ttcttatgta gtatttcctt tgtgagctga 120
agattaatgc atggattcac ctccttcagc acatttcatt tcaattgtga agaaaagatt 180
ccaggcactg aatgtaaaat tgaacatgac attttgacat tccttcttct gagagctggg 240
ttggtcttag ttgctgtgag gctctagaca ccgaccatac agggcgtggg gctgctcctg 300
gacatgaaca tcctccgaag ttctccccag tccactttac cccctctggg ctcacctctg 360
aatgtccccg cgtacctngg ccgngaccac gctaaggg 398

<210> 1290
<211> 403
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 84
<223> n = A,T,C or G

<400> 1290
ccctttcgag cggccgcccg ggcaggtacg cgggacattc agaggtgagc ccagaggggg 60
taaagtggac tggggaggac ttcngaggat gttcatgtcc aggagcagcc ccacgccctg 120
tatggtcggt gtctagagcc tcacagcaac taagaccaac ccagctctca gaagaaggaa 180
tgtcaaaatg tcatgttcaa ttttacattc agtgcctgga atcttttctt cacaattgaa 240
atgaaatgtg ctgaaggagg tgaatccatg cattaatctt cagctcacaa aggaaatact 300
acataagaag caagaccaca gactcaagac ggacataatt ggattttttt tgccatggcc 360
tggaaagaaa ggtacctcgg ccgcgaccac gctaagggcg aat 403

<210> 1291
<211> 360
<212> DNA
<213> Homo sapiens

<400> 1291
ccctttcgag cggccgcccg ggcaggtact ttaagaagta atgcccttga gttagaaaat 60
catcatttta aaatctctga tgatataatg gatttaggca ataatcatca aaaaactaag 120

ttaagactac aacctgtcaa ccaaatacca tgtgtagacc ttgtttggat attgacttaa 180
gcaaataacc ctacaaagac acttttacaa tcaagaaaaa ctgaatggga ctgcgcatgg 240
tggctcatgc ctataatccc agcactttgg gaggcaggtg aattgcttga gcccagaagt 300
ttgagactag cctgggcaac atggtgagac cctgtctcta atataattta aaaaaaagaa 360

<210> 1292
<211> 390
<212> DNA
<213> Homo sapiens

<400> 1292
cccttagcgt ggtcgcggcc gaggtacatg ttaaggtttg gtgaatgcat gcattcacgg 60
aactaccact ccagttgtgt tagtttccca tggcagcttt aacaaattac tgcaaatttc 120
atggcttaaa cgaacacaca tttatgctta cacagttctg gcagctaaat gaccaatggg 180
tttcattggg acaaaatcaa ggtgatggca gagccctgct tcttttgggg gctctagagt 240
ccatctgctt ccttcccttc tccagcatct ggaggtcacc tcatttattg gcttgggtcc 300
ctgaactgca tcaccttttc tttcttgtgt ccattgtttt ctcatcttcc tcctcatctg 360
tctgcaaatc tccctctgcc tccctttcat 390

<210> 1293
<211> 272
<212> DNA
<213> Homo sapiens

<400> 1293
ccctttcgag cggccgcccg ggcaggtact tttttataga agcccaactg gactgacaga 60
tgtcaagggg ttgggggatc ctcagtaggc taacctagca gagttcttgc taaaactggg 120
ctagacaggc cacagacaag atagccaaaa tcaaagccta gttgagaagg gaattcagag 180
gagcatgact aaaatttggt caaggggaga gtctttgtca ccccagcacc tagcacaagt 240
ggttggtacc tcggccgcga ccacgctaag gg 272

<210> 1294
<211> 386
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 162
<223> n = A,T,C or G

<400> 1294
cccttagcgt ggtcgcggcc gaggtacctt cactctccac caagcacctg ttatcggaaa 60
acgtccaaac actttacatg tctcttgtgt gttttcatca caaatagaaa ctaaaaaaaa 120
acaaacaaaa acccacaaaa gttaactctg gagattattc anaaaccgtt tcctcaaagt 180
tttatcaaac ttaccactat ctttaatctc cctacagcac tctctaaaga tgtctggtag 240
ggtgcctgta acactgcatt ctgcctacct ctttttctgt ctccctccac tacactgtaa 300
atactaaaac aggacactgt ttcgtttgtc tttgtattcc aaaacgcaag cacagtacct 360
gcccgggcgg ccgctcgaaa gggcga 386

<210> 1295
<211> 375
<212> DNA
<213> Homo sapiens

<400> 1295
cccttagcgt ggtcgcggcc gaggtacaga ttatttcata gcccaggtat taagcctcgt 60
gcccattagg tgtttttact gatcctctcc ctccttccat gctccaccct ccaaaaggcc 120

ccagtgcgtg ttgttgccct ctatgtgtcc gtgtgttttc atcatttaac tcccacttat 180
aagtgaaaac atgttaagta tttcatgtta gtttgctcag gataatggct tccaactcca 240
tccatgtccc tgcaaaggac ataatgtccg ttctttttta ttggcctaat tcttaggcag 300
tcttttctgg aattgtgaca gaaaaggttc aaagcagtta tttttttca tattatatcc 360
atagttgtgt tttta 375

<210> 1296
<211> 367
<212> DNA
<213> Homo sapiens

<400> 1296
cccttagcgt ggtcgcggcc gaggtacgcg ggtggactgg ggagaacttc ggaggatgtt 60
catgtccagg agcagcccca cgccctgtat ggtcggtgtc tagagcctca cagcaactaa 120
gaccaaccca gctctcagaa gaaggaatgt caaaatgtca tgttcaattt tacattcagt 180
gcctggaatc ttttcttcac aattgaaatg aaatgtgctg aaggaggtga atccatgcat 240
taatcttcag ctcacaaagg aaatactaca taagaagcaa gaccacagac tcaagacgga 300
cataattgga tttttttgc catggcctgg aaagaaaggt acctgcccgg gcggccgctc 360
gaaaggg 367

<210> 1297
<211> 402
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 337
<223> n = A,T,C or G

<400> 1297
ccctttcgag cggccgcccg ggcaggtacc acctatgaag tattctgcct aaagatatta 60
aacctgaagc ttatcaaatc tgtaaatctg actacgactt gactgaaaat ttagtggcaa 120
aggaatatag taaatgacat cacaaggata tagcatccaa acccagaaag cggatattct 180
ttaggataaa tgacccagtt tcctcaacaa tgaaatggcc tggaatagaa aaaagaggga 240
gaacttaaaa taacatacca accaaatata gcacatggat cctgttttaa tatggattca 300
gaaatccaat tctgaaatga catttttaa aaatcangag gccgggcgtg atggctcatg 360
cctgtaatcc cagcactttg ggaggctgag gtgggcggat ca 402

<210> 1298
<211> 326
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 39, 64, 70, 104, 114, 122, 124, 129, 134, 136, 141, 146,
180, 182, 190, 201, 210, 214, 215, 228, 234, 236, 243, 245,
246, 247, 274, 309, 313
<223> n = A,T,C or G

<400> 1298
ccctttcgag cgggcgcccg ggcaggtaca gtccactanc atggaagcta tgggtgtggg 60
catntaaaan tgccccgtaa gcaggtgtgg ccaggctggg gccnttggaa aagncaacca 120
antnaagant gctnanatca naccancccc atctcaagtg caagattgcc cagcctccan 180
anatcatgtn tcagaggata nctctgtcan aacnnaaccc aggcacantt caantnctct 240
gcngnnngta gttagacttc ttttattaag caantctcct ttttttaaaa agggaactct 300
cggtcctgnt ctntgctggg caatct 326

<210> 1299
<211> 301
<212> DNA
<213> Homo sapiens

<400> 1299
ccccttagcgt ggtcgcggcc gaggtacgcg ggtgagatgg caaatattta ttaatcatcc 60
aactgtgtat cagacactaa gaataagctg ggaggccatg gcaagtgagg tcaccacagt 120
ccctgccaca gtggaggtta tggtatacag gtaaggcagg gaagagcact gcaaagggtt 180
tgcccattgc atcagtcatt tatttatgca catgttgatt caacaattat ttctatgcca 240
agctgtcttc aaggtgctgg aggaaatgaa gcgtacctgc ccgggcggcc gctcgaaagg 300
g 301

<210> 1300
<211> 310
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 253, 274, 290, 292
<223> n = A,T,C or G

<400> 1300
cccttagcgt ggtcgcggcc gaggtacctg ccatccaata cggtcattag attgggtcat 60
cttgattaga ttagattaga ttagattgtc aacagattgg gccatcctta ctttatgata 120
ggcatcattt tagtgtgtta caatagtaac agtatgcaaa agcagcattc aggagccgaa 180
agatagtctg aagtcattca gaagtggttt gaggtttctg tttttggtg gtttttgttt 240
gttttttttt tcnccttaag ggaggattta attngctccc aactgattgn cncttaaatg 300
aaaatttaaa 310

<210> 1301
<211> 314
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 159, 162, 278
<223> n = A,T,C or G

<400> 1301
nggggccctt agcgtggtcg cggccgaggt actttatgtt tactctgtca ggaaagcgtc 60
agatgttttt atttccaatt ataagttttg taatgcatca tgtattttgc tgacagtctt 120
caagttcttg aaatagtgaa caaattaaca gcagatatng gngtgagaga attagaaaac 180
caactggcaa ctcatatgat agaattcaga tacagggatg ggtggaatgg gctcatttat 240
tttattttct cagtcatact ttgtaattaa cttaggcnaa aaaaaaaaaa aaaaaaaaag 300
tacctgcccc gggc 314

<210> 1302
<211> 417
<212> DNA
<213> Homo sapiens

<400> 1302
cccttagcgg ccgcccgggc aggtacagag ctggaggccc aaacagccag ccaaatcttg 60
ctgtatttta tccaccatag tataatccag agactgtgga ccccaaattg ggatgctttt 120
aaaatccaaa gtagttctgt atacacattt gaagaaaaat gctgttgaag aaatgtatcc 180
ataaaacact tcaggtcaaa aagcaaaaga atatcaagaa aaagtttaaa taacatgatt 240

cctactggtt ttagatcata attatcatcc tatattattt atattccgta tcactgttat 300
ctttctctga caaataattc tgaaatacaa tacattttaa agttatgcag gattttaaag 360
acctcgtctt caacaaatac aagaagttta ataacaaact ttaaataaat gctcatt 417

<210> 1303
<211> 323
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 160, 161
<223> n = A,T,C or G

<400> 1303
gggggccctt agcgtggtcg cggccgaggt acctgggact acaggcacac actaccatgc 60
ctggctaact tttgtagttt ctgtagagac gggtttcacc atgttgccca gactggtctc 120
aaactcctgt gctcaagcaa ttctcctgcc tcgggcatgn ncaagtgctg ggattacagg 180
cttgagccac cacactcagc cattaggcat ttctttttgt tccagaggtc tgtgaaaaac 240
tatggagaca tgaagggcag tgagccgaga aatcgtggcg ccttctaacc tacaggataa 300
gggcgtataa tcagacttag tta 323

<210> 1304
<211> 415
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 20, 22, 24, 32, 55, 330, 356, 377
<223> n = A,T,C or G

<400> 1304
tctagatgca tgcnccagcn gncngatgga tntcgtgcat aattcgacct tagcntggtc 60
gcggccgagg tacgcggggt caaagccact gtttttataa tctactcctt atataaaaca 120
ttaagtgagg ccaggtgcag tggcccattt ctgtaaaccc agcactttgg aaggccagtg 180
caggtggatc acttgagtcc aggagtttga ggcctgcctg gccaacatgg cgataccctg 240
tctctactaa aaatacaaaa attagctggg tgtggtggtg catgcctgta gtcccagcta 300
ctcaggatgc tgagacatcg cttgaacctn ggacgtggag attgcaatga gctganatcg 360
agacactgca ctgcagnctg ggtaacagag tgagacttct tcccaaaaaa aaaaa 415

<210> 1305
<211> 283
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 21
<223> n = A,T,C or G

<400> 1305
ggggggccnt tagcgtggtc ncggccgagg tacccgggta taagaatgag acacagtagc 60
tgctttcatt gattctgttc aaccgttgat tggaattcca agcaaatgca gcaagacaag 120
aaaaagaagt cacaaccgga agaggtgggg aggaaggccg ggacaacagc tcagtaaagc 180
tgaggtgcaa ggctgggcac ggtggctcac acctggaatc ccagcacttt tggaggcccg 240
aggtgggagg atcacctgag gtgaagacca gcctggacaa cat 283

<210> 1306

<211> 247
<212> DNA
<213> Homo sapiens

<400> 1306
cccttagcgt ggtcgcggcc gaggtaccac agaggccagc acagcttctc gtgaaagaga 60
gcttctgtat tctcagtggg atccaggcaa acaagtaaat tctggcccca ctccctccac 120
cactcctctg ggctcacctc cagtctgaag agatgcactg gatcacaggg agattaaatt 180
caaagaagac tgcaggcaag gaggggctct gcagcagctg tacctgcccg ggcggccgct 240
caaaggg 247

<210> 1307
<211> 406
<212> DNA
<213> Homo sapiens

<400> 1307
cccttagcgt ggtcgcggcc gaggtaccag tcatattgga ttagggctca taatgtcatt 60
ttaacttaat tgtctgtcaa aaaattctgt cttcaaatac agtcacattt ctagggttta 120
ggattttaac atatgaatgc agggggacaa ttcagtccat aatactgtgg ttatcacttt 180
ttggtcttaa gatgattgct acagctctac aacccacatc tattataaaa acaaaaagaa 240
gagagaaata aattgagaga ggagagttcc ttgatcactt tgcaggacgt gcgacagggg 300
gtgttgctca tctgtttggc caccacacat tctcaggccc tttgcaggac agggagcatg 360
ctgacaggca ggtgcagcaa cccaggcgag tgccttgggg ctccag 406

<210> 1308
<211> 327
<212> DNA
<213> Homo sapiens

<400> 1308
ccctttcgag cggccgcccg ggcaggtacc acctatgaag tattctgcct aaagatatta 60
aacctgaagc ttatcaaatc tgtaaatctg actacgactt gactgaaaat ttagtggcaa 120
aggaatatag taaatgacat cacaaggata tagcatccaa acccagaaag cggatattct 180
ttaggataaa tgacccagtt tcctcaacaa tgaaatggcc tggaatagaa aaaagaggga 240
gaacttaaaa taacatacca accaaatata gcacatggat cctgttttaa tatggattca 300
gaaatccaat tctgaaatga cattttt 327

<210> 1309
<211> 305
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 90, 114, 154
<223> n = A,T,C or G

<400> 1309
cccttagcgt ggtcgcggcc gaggtacatg cctgtaatcc cagctactgg ggaggctgag 60
gcaggagaat tgcttgaacc tgggaggcan aggttttagt gagctgagat cccnccattg 120
cactccatcc agcctaggtg acagagcgag cganactcca tctcaaaaaa gagaaagaag 180
aagaagagag ctcaacaatg cagccaggga agatttcctg taggagtctt gagacaggag 240
aaagagagat ggaagagaaa gaaagcgcat gctgcctctg aaaaaatgga gagatcaccc 300
ccgcg 305

<210> 1310
<211> 309
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 30, 166, 180, 187, 267
<223> n = A,T,C or G

<400> 1310
actttttttt tttttttttt tttttttttn gagagatggg gtctcaccgt gttgccccag 60
ctggtctcaa actcctaggc tcaagcaatt ctcgcacctc agtctcccaa agtgctggga 120
ttacaggtgt gagccacgat ggccagccat aatgcgaagt tttaanaagc tttcagggan 180
aaggganaga gaatgctctg gaagcagcca agagaatcaa tagagacatt cacccatttc 240
ctgtcagtgt tacaaggaag gtagaanagg acagagccat tgtttgagaa gcctacaggg 300
caagccaag 309

<210> 1311
<211> 412
<212> DNA
<213> Homo sapiens

<400> 1311
ccctttcgag cggccgcccg ggcaggtacg cgggatgaac aagctcagga aaaatctaag 60
aaggccttaa tttctcacct ctagctgact ttcaggctac ataaacagga attgaatgat 120
aaggtagaaa tgtgaactcc ctgactgagt gttgaaggta tgccctacac atccacaaaa 180
cccttgagca aagactaaac taaataagca gagacttaag tggccacaca taaaaaagaa 240
tacagactgc agaatgtgtt cccccaaaaa atcactaagc aaagagcagg agtaacaata 300
aacagcaaca ataaatcctg cagaaaagga gattctgatt tttagagttg acacataata 360
ttatttaaga cactcagttt tcaacaaaaa attatgaggc atgcaaaaaa aa 412

<210> 1312
<211> 137
<212> DNA
<213> Homo sapiens

<400> 1312
ccctttcgag cggccgcccg ggcaggtaca tgagattaac tgatgtgtct acgtggtgcc 60
agtctgacta acagtggatg tgtgtgtgag tgaccctgca atgtcatgat gtacctcggc 120
cgcgaccacg ctaaggg 137

<210> 1313
<211> 310
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 268
<223> n = A,T,C or G

<400> 1313
ngcccttagc gtggtcgcgg ccgaggtaca tgcctgtaat cccagctact ggggaggctg 60
aggcaggaga attgcttgaa cctgggaggc agaggtttta gtgagctgag atcccgccat 120
tgcactccat ccagcctagg tgacagagcg agcgagactc catctcaaaa aagagaaaga 180
agaagaagag agctcaacaa tgcaccaggg aagatttcct gtaggagtct tgagacagga 240
gaaagagaga tggaagagaa agaaagcnca tgctgctctg aaaaaatgga gagatcaccc 300
ccgcgtcctg 310

<210> 1314
<211> 360

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 73, 232, 237, 250
<223> n = A,T,C or G

<400> 1314
ccctttcgag cggccgcccg ggcaggtact tttttttttt ctttctttct tttttttttt 60
gtatttttag tanagactag gttttaccgc gttagccagg atggtctgga tttcctgacc 120
tcgtgatccg tccgcctcgg catcccaaag tgttgggatt acaggcgtga gccacggagc 180
ccggccatag gcctgtttct tattctatat tcctgttaat gtaaacctcc tnagatngga 240
agacaatcan ttttacaggg taagaattgt tttaattatg tggcagcttt tctccaaaca 300
tgaagagaaa cattagaaat acgtttaata aaatctctat tattttgttt tctttcaagt 360

<210> 1315
<211> 149
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 142
<223> n = A,T,C or G

<400> 1315
ccctttcgag cggccgcccg ggcaggtact gggaatgact gagtagtcac aaattcagag 60
agctgctggg aggtagatga gttggggctg ggaggtgtcc atgggatttg ggggcttgag 120
ggtcacggtc acctcaagac ancaagatg 149

<210> 1316
<211> 287
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 159, 174, 181, 183, 185, 186, 198, 204, 213, 214, 216,
219, 232, 243, 283
<223> n = A,T,C or G

<400> 1316
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttnggt tttttttttt 60
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 120
tttttttttt atttttatt gtttttttc caaacccana aagcggatat tctntaggat 180
nantnntttt tttttttnaa taanaaaatg ccnncntana aaaaagaggg anaacttaaa 240
atncaaccaa ccaaatatag cacatggatc ctgttttaat atnggat 287

<210> 1317
<211> 163
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 19, 93
<223> n = A,T,C or G

<400> 1317
cccttagcgt ggncgcggnc gaggtacctg ctgtcttatg catgtttaac acaacagcaa 60
caataatata agtagttagc atatattaaa gcnttaacga acaccaagca tcgttaaata 120
tattacatgt attattgctt aattttcaca acattactaa tgg 163

<210> 1318
<211> 351
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 34, 272, 282
<223> n = A,T,C or G

<400> 1318
gtaggaggca aagtgatctg cttgaaaata tgnntgaaag ataatcagca aataatttca 60
aatcttggaa ctgtcattat gaatttactg ccattagatt gtattgaggt ccctgaagtc 120
atgggataac cagaaggggg aatttgaaga ttccatttaa taaaaagaag ttgatacaaa 180
gaagctaaga tatataataa aattttcata gtttggaaga gaacatgatg cttctggtat 240
tccaattact gattatacct tttgttcata gnctttttaa anctgagctc tttggccaat 300
cccatttcag cccgctttgg tctcattagg tacctgcccg ggcggccgct c 351

<210> 1319
<211> 293
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 79, 99, 144, 155, 157, 169, 251
<223> n = A,T,C or G

<400> 1319
cctttcgagc ggccgcccgg gcaggtactt tttttttttt tttttttttt tttcaaaact 60
agtgactcct gtcactctnt tccactctaa aagggcaana tgcaatggca aaagggcaca 120
taattctgtt tccttgagtg tctnttagta ttaangnagg ctcagtttnt aaatattaaa 180
atgacccaca ataagagctg caatgattaa gtttgtgact tgttatacca atcaatgtat 240
gacaaactta naaaaactgt atataattta caatgacaag agaggaaaga gga 293

<210> 1320
<211> 103
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 86
<223> n = A,T,C or G

<400> 1320
cccttagcgt ggtcgcggcc gaggtacgcg gggttcaaag tctattttta ttccttgata 60
ttggactttt attttttttt atttgnggat ggggacattg tga 103

<210> 1321
<211> 371
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 40, 91, 106, 146, 165, 173, 205, 207, 245, 246, 250, 258,
263, 288, 348, 350, 357
<223> n = A,T,C or G

<400> 1321
cccttagcgt ggtcgcggcc gaggtacaca aacccctttn caaatgagga ccgtgaagaa 60
agggcccaaa gtatctgcac acacacagaa natgcccaga cagcanctag taacagttct 120
gggtgccact tactatgatc ctggancagc tgggctgcga tgganacccg gcnccgctca 180
cccgtggaaa tgccccccaa gctgnanttg ccaatcagtc ggtctgccac atggctcaga 240
ctcanntctn ccatgacngt ctncacctgc aggagacaca aattacangg aaggctggga 300
gtctctgtgg ctgctatttc aattcatggg ctggggagga catgaaanan gcagcanacc 360
gcccaagaat c 371

<210> 1322
<211> 122
<212> DNA
<213> Homo sapiens

<400> 1322
cccttagcgt ggtcgcggcc gaggtacttt ttgcattttc aaatgacttt gactattgcc 60
agagtcatta tagacctgcc tatgatgtag gagtttattg tatctagtgg aaaacatacc 120
tg 122

<210> 1323
<211> 625
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 27, 30, 34, 41, 45, 58, 60, 70, 76, 77, 78, 79, 82, 87, 88,
89, 102, 104, 105, 107, 110, 111, 112, 113, 120, 125, 133,
138, 139, 140, 144, 148, 149, 152, 155, 156, 157, 160, 161,
162, 164, 170, 174, 175, 179, 180, 181, 182, 185, 186
<223> n = A,T,C or G

<221> misc_feature
<222> 188, 191, 192, 196, 197, 198, 199, 200, 202, 204, 213, 238,
242, 251, 259, 260, 261, 262, 264, 265, 271, 272, 273, 278,
282, 290, 291, 295, 303, 304, 305, 308, 311, 316, 317, 323,
324, 325, 326, 327, 328, 337, 343, 344, 347, 353, 356
<223> n = A,T,C or G

<221> misc_feature
<222> 357, 358, 359, 360, 362, 364, 368, 369, 376, 387, 396, 399,
406, 409, 410, 418, 432, 434, 435, 441, 448, 452, 453, 458,
462, 463, 467, 474, 486, 487, 490, 492, 493, 494, 496, 502,
505, 526, 530, 535, 544, 545, 546, 548, 550, 553, 564
<223> n = A,T,C or G

<221> misc_feature
<222> 567, 573, 576, 580, 584, 586, 589, 590, 592, 600, 602, 613,
614
<223> n = A,T,C or G

<400> 1323

acttttttttt ttttttttttt tttttttnggn aaanttttttt ntttngggga aaaaaaancn 60
aaaaaaaaan tttttnnnna anttttnnna aaaaaaaaaa ancnncnaan nnngggggn 120
ttttnaaaaa aanttttnnn aaanccccnnt tnccnnnttn nncnaaaaan aaannttttnn 180
nnttnnangg nnaaannnnn tngnttttttt aangggtttt tggggggttc ccccaaancc 240
cnaaaaaaaa naaaaattnn nngnngggg nnnaaaancc cntaaaaaan ncccnaattt 300
ttnnnttngg naaaannccc cannnnnntt tttgggnaaa aanntanccc ttnggnnnnn 360
cntngggnna aaaaanggcc caaatanttt ttttcnaang gggttnaann ttcccaantt 420
tttttgaaa ananngggt nccttttngg gnnttggnaa anntttnaaa aaangggggg 480
gggggnnttn tnnngntggg cnccnttttta aaggggaaa aaaaanagcn ccccnccctt 540
ttannntnan ttnggggaaa aagnggnccc aanggntttn tttntnccnn tnaaaaaatn 600
tntaaaaggg ccnngggggg ttttt 625

<210> 1324
<211> 701
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 51, 53, 56, 59, 66, 69, 80, 144, 153, 164, 182, 217, 277,
284, 312, 323, 333, 346, 363, 371, 379, 394, 422, 425, 435,
448, 500, 502, 512, 514, 529, 532, 536, 562, 571, 576, 578,
579, 582, 612, 616, 619, 620, 623, 624, 625, 626, 627
<223> n = A,T,C or G

<221> misc_feature
<222> 645, 647, 650, 651, 655, 656, 660, 669, 675, 679, 681, 684,
685
<223> n = A,T,C or G

<400> 1324
cccttagcgt ggtcgcggcc gaggtactgc tgcatttttg tttgtgtatt nantcnttnc 60
ctttgnttnc aagtgaaatn ttttgaaaac agtcctatta tggctcaaat aagcagaaat 120
ggggattttc ttaggctaat tgangaacat ggngagggtg gcanggacga ctgctgacac 180
anggcacgct ggcctggaga agcaacagct gctggcntgc gtggacaccc tttgcagacg 240
tgtcccctgc gggggatgat aattcatcac cctccanccc ccancctagg ggcctctcac 300
acaaccccat cntttcacca canaagaaca cantgccgat gtgccnatgc ttccaatcac 360
cangacccaa nggttgccna caccttggtc caanatgtgg gatcaaaatg gggtggatta 420
tnttnagggg ggctnacttc taaatttnaa caagcctgaa actttcactg gggaaaatac 480
tttttttaacc ccactctaan gnattccatt ananatgaca tccattttna anttanaaga 540
catgttttta cctaaaaaat anatgaaaaa ngcttngnnt tnaaaaatgg gaaaaaccta 600
ttgctttccc cnaatnccnn aannnnnaat tttttccctt taaancnttn ngcannaaan 660
aaacttttnc ttttnattna nacnnccttt tttttaattt t 701

<210> 1325
<211> 437
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 30, 41, 53, 62, 68, 95, 96, 260, 267, 270, 283, 289, 291,
298, 316, 320, 326, 331, 338, 345, 351, 356, 369, 392, 394,
395, 398, 417, 421
<223> n = A,T,C or G

<400> 1325
ccctttcgag cggccgcccg ggcaggtacn cgggataact nttcatggga atnagattta 60
tntcccanat ttaaaagcaa aagctcataa cagcnnggat ttcacttaaa ggaaatactt 120

ctgaacatgt tgttaaaata ttgaagaact aaggccaaga tgttctgttc attataaaag 180
tggacttcac tagttccaat ggtatattat tttcagtgga tcaaatatat ctcatatgct 240
ggacttttaa tgtctggacn ccatatnttn tggaagggca ttnatttant nttattgngg 300
atattttcat tttatnttan cacacnagac nattactnca agcangaatc ncccanagaa 360
tgagaaaang ctcctggtcc tcagagggca tngnnaanta ggacaggcca agacatnatt 420
nttttgactt gggcttt 437

<210> 1326
<211> 245
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 21, 68, 171, 194, 224, 232
<223> n = A,T,C or G

<400> 1326
tatctgcaga attntccctt ngcgggcgcc cgggcaggta cagacctgga ggcccaaaca 60
gccagccnaa tcttgctgta ttttatccac catagtataa tccagagact gtggacccca 120
aattgggatg cttttaaaat ccaaagaagt tctgtataca catttgaaga naaatgctgt 180
tgaagaaatg tatncataaa acacttcagg tcaaaaagca aaanaatatc angaaaaagt 240
ttaaa 245

<210> 1327
<211> 697
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 25, 51, 64, 73, 93, 118, 130, 139, 149, 156, 179, 197,
199, 201, 205, 209, 214, 225, 236, 265, 268, 270, 272, 273,
305, 313, 319, 333, 334, 340, 344, 366, 380, 386, 388, 390,
391, 399, 400, 401, 407, 411, 417, 420, 425, 429, 430
<223> n = A,T,C or G

<221> misc_feature
<222> 438, 444, 466, 480, 498, 503, 504, 508, 511, 517, 525, 527,
537, 549, 550, 555, 564, 566, 584, 585, 587, 591, 592, 600,
602, 612, 615, 636, 641, 644, 668, 676, 679, 681, 683, 685
<223> n = A,T,C or G

<400> 1327
ngaggaatga tgagctctct aattntctcc tacacaacat ttcttatcaa ngccctggat 60
cccnacctat ganagccttc cagggatgcc canggtaaac caaatggggc tgaccatntg 120
cccattgttn ggggagtgna gttgaaaant aaaggnagcc cggtcccctt taacttaang 180
gtgagcccct tacaatnang ngggnaccnc aaanctattt catanatccc cccctncctt 240
ttttgggttc ctttggcgga attgnggncn annaatggaa aatggggctt ttcgtgggga 300
taaanacttt tanaaattnt tttcaacctt ttnnttgggn tttncaaggg gggaattcca 360
aaaagncccc cccaaaattn ctaaanangn naaaatttnn naacctnaaa ncagggnagn 420
tccanatgnn accccggncg attnccccaa ccaaaaaaaa aaaatnggcc ctttcaaatn 480
ggtttggcct tggaaacncc canngggnaa nataggnaaa gtttncnctt aaccaanaaa 540
agcccaagnn cgganaaagg gggncncccct tcgggaactt tttnntnagg nnatttttan 600
anataaaacg gntantggtt tttaaagggg gctttnaacg nggnaaccaa aaggggcctt 660
tttcaaanaa aaaagngtnt ncnanggaac ttccccc 697

<210> 1328
<211> 469

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 16, 17, 19, 21, 22, 28, 42, 49, 63, 74, 75, 80, 109,
112, 123, 126, 127, 130, 141, 148, 157, 169, 234, 236, 238,
249, 288, 315, 352, 384, 415, 419, 422
<223> n = A,T,C or G

<400> 1328
tccgggctat ggtngnncnt nnagcttntg cagccacccc tntgctctnt tttctgccct 60
ggnccctctt ctcnnctccn agagcaccat gccttccata caaggtggnc ancccctgttg 120
ctnctnnagn ctgcaccctt ncacaccntt ctttctnatg acattccanc tgtctggaat 180
atgggcttcc caccctccca ttcacctacc ctctcacctg gtgagcttac tgtntngngc 240
ccagctcana cgatatggtt gaagaatagg tgtcaccttc atctgagnac tcatagcata 300
tttcttatac ctganagtaa acaattgcat gtcattatat ggcatttaag tntgtctcct 360
tagatagcct ctaagtccct tganggcagg gactatatct tattcatcta tttgncctna 420
gnactactca gtgcccagcc atagtaggtg tccaataaat atttcaatg 469

<210> 1329
<211> 593
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 24, 43, 47, 64, 66, 77, 81, 98, 103, 114, 153, 161, 166,
185, 190, 191, 194, 200, 204, 231, 238, 260, 274, 278, 291,
293, 320, 323, 325, 326, 333, 341, 346, 358, 375, 377, 379,
398, 406, 421, 426, 430, 446, 451, 455, 457, 458
<223> n = A,T,C or G

<221> misc_feature
<222> 477, 480, 499, 503, 504, 521, 534, 537, 544, 557, 565, 571,
580
<223> n = A,T,C or G

<400> 1329
ccatttgtcc ccanatggta tagngttaaa aaaagggggt aangccnttt aacttggggt 60
gtgntncccct tccccgnaat ntcccaagcg gttttaanta aantcggtaa gcgnaagggg 120
ttctcgccgg cggccttaag gggaaggttc canattaaca naagcntgta attctcgggg 180
gcctnttaan natngggggn cccngaaaaa aataacttta aattggccct ntcttggntt 240
cggtcttttg ggggaaattn atttaattgg cggnaagngg gaattcgggg ngngggaaat 300
cttcaatttt cggcctttan ggngnnaatt ganaaagggg naattngggg aatttaangg 360
ttaaaaattt aaggngngnc ccaaaagggg gaacccccncc cccttncccc ttaaagattt 420
nttcgntttn aaggggggggg accccnggaa ntccngnnga aaaaaaaatt ttgggtnggn 480
ttaagggccc ccgaaaaant tanngggaac ccccccccgcc nggtttaccc cctntgnccc 540
cccngggggg ccggggnccc cggcntttcc naaaaaaaan gggggggcccg gaa 593

<210> 1330
<211> 605
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 237, 250, 255, 256, 261, 262, 264, 267, 274, 279, 280, 291,
294, 302, 303, 314, 317, 319, 345, 426, 430, 431, 497, 498,

520, 530, 560, 568, 569, 570, 601
<223> n = A,T,C or G

<400> 1330
acctattaac atcactcagc tgctgtgaaa taggcttaca ggcaacatgg agtgtcaatt 60
acccaatgtt taaagtcgat catacagatt ggactacaat ctctatggct cataaagtct 120
ttaaaggatt gacagatgat ttatctcata tgtagacaat gattctcagc agttaactag 180
cgcaacttga taatatcaat tgcttgagaa aatcagataa ttgcttgaga aaattangac 240
attgcttgan gaagnnccgt nntnaantaa attncttcnn tgaaggaact ngtnaaccat 300
cnnggaaagg acanctncng gcttgggaat gggggacctt gaatnatgct gcttcaaaaa 360
ttctggcagc aataacatgt ttaattatga aaaataatgt tggaaacaat tcaattttct 420
aggcanaatn nttcaaaaaa gatttcgagg cagtcaataa aatctgttcc atttaaaagg 480
atcacctcca atgccanngt acaaagactg ccccaatccn aacttgcgtn gtttgggggg 540
aacctgcttc ataaggtcan ggggcccnnn tcttgggaac acaaatgccc aatcctttcc 600
ntttt 605

<210> 1331
<211> 378
<212> DNA
<213> Homo sapiens

<400> 1331
ccctttcgag cggccgcccg ggcaggtaca agtatcttag gctactggac cgggcaggct 60
ttactgaggg gctccgtgca gcttgctggt gcagccgagc aagtgggcct gtagccgact 120
cttaatccag gttggtgcta ttcaaagaga tcatctttca cccgagggat ttctgggcac 180
ctattttgcg gatcagaaag tagagaaaga aggtaacttt gctgaaagct agtctgggga 240
gttagtagct gatacagatc agcatttcct aactatgaga tttcataata ttctctcttg 300
tctcgattct gagtcactgg tgcctgctgt ggtggcattg ttcatgaaca tgtacctcgg 360
ccgcgaccac gctaaggg 378

<210> 1332
<211> 447
<212> DNA
<213> Homo sapiens

<400> 1332
ccctttcgag cggccgcccg ggcaggtaca gaagggccat gctgttatta ctcttacaca 60
aggaggcagc cctcgagcca cagggtccag ctgttggcta taatagccta ccggtctctg 120
atgatcacca tgtttctgga attcaagcca ggaagaagca gcaatctgtc ttctggatta 180
aaactgaaga tcaacctact ttcaacttac taagaaaggg gatcatggac attgaagcat 240
atcttgaaag aattggctat aagaagtcta ggaacaaatt ggacttggaa acattaactg 300
acattcttca acaccagatc cgagctgttc cctttgagaa ccttaacatc cattgtgggg 360
atgccatgga cttaggctta gaggccattt ttgatcaagt tgtgagaaga aatcggggtg 420
gatggtgtct ccaggtcaat catcttc 447

<210> 1333
<211> 378
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 86, 148, 188, 199, 205, 214, 218, 239, 257, 272, 309, 322,
356, 358, 361
<223> n = A,T,C or G

<400> 1333
ccctttcgag cggccgcccg ggcaggtacc gcgggaaatg tataccgctg ggaatcacta 60
attttcccat tcctggagag cctggntttc cacttaacgc aatttatgcc aaacctgcaa 120

acaaacaggg aagatgaagt gatgagancc tatttacaac cagctaaggc aagagactgg 180
gactgagnac tttgggaana aagtnttcga cccntcanga atgataaaac ccagcaagng 240
ggtgggactt gctttgngaa agagacagtt tnaatggaac aagaagttct ttttcaagga 300
cccttgggnc caggtggaaa anggggaagg cccccggggc caaggcccac cccggngntt 360
ntccaggaaa cccccctg 378

<210> 1334
<211> 533
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 117, 118, 120, 218, 225, 288, 310, 313, 314, 317, 318, 319,
322, 324, 328, 334, 354, 355, 360, 363, 372, 379, 382, 388,
393, 394, 405, 406, 420, 426, 427, 431, 436, 439, 440, 461,
465, 468, 485, 486, 515
<223> n = A,T,C or G

<400> 1334
ggggaggcat tgaggcagcc agcgcagggg cttctgctga gggggcaggc ggagcttgag 60
gaaaccgcag ataagttttt ttctctttga aagatagaga ttaatacaac tacttanncn 120
aatataatca ataggttact aagatattgc ttagccgtta agtttttaac gtaattttaa 180
tagcttaaga ttttaagaag aaaatatgaa gacttagnag aagtngcatg aggaaggaaa 240
agatgaaagg tttctaaaac atgaccggag gtttggagat gaagcttntt catgggagta 300
aaaaaatgtn ttnnaannng ananttgnga gganaggggc tactagagcc cccnnaattn 360
atnccaaatt anaaagggnc cngtgctntt tannaattaa aaatnnaaag ggtggacttn 420
aaaccnngct ntaaangtnn taagtttaaa aaagtttggg ngggnggnat ttaaaaaata 480
aaatnntgga aagggcgaat cctttttaaa aaaangagaa tttaaacccc cga 533

<210> 1335
<211> 228
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 58, 106, 160, 172, 205
<223> n = A,T,C or G

<400> 1335
ccctttcgag cggccgcccg ggcaggtaca catgtccaag gtcaggtcct gggtggtnaa 60
ggtaaataca aattggaagg gcactgtgtg agccaaaatg agtcanatta gtcatgattc 120
atttccagtt tgggttttgg gtggtcttgg agaatgttgn aagcactgct tnattgatag 180
gttgattgag ccagacttta ctcancagcc tggaaaagga gagatggg 228

<210> 1336
<211> 708
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 524, 566, 567, 578, 582, 598, 608, 615, 643, 644, 646, 663,
675, 686, 691, 706
<223> n = A,T,C or G

<400> 1336
ccctttcgag cggccgcccg ggcaggtacc catataaatc ccaaaccccc agctccaaaa 60

ggagatgaat agaagagcag aagaatgcag agtggcaagg caaagaatgg gagaagagaa 120
ggagcatctg aaagttgaga ggagttgggc tggggacggt ccgagaggag attggccgct 180
ggatggccaa attccaggag aaaaataatc tcactccatc cccсttccag ctgcccatcc 240
accctgctga gagccacttc catcactcaa taaaaccccc acattcatcc tttaagtctg 300
tgcgacttga cttcctggat accaaaaaat tacctgggtc ccaagagggc acccgagctg 360
gttacacttc ttcagctgtc ttcagatggc aaatctaaaa gagcacactt gtacacacac 420
ccacttgggc ttttaaggaa gtcacaggca cccaccctta agatcctacc ttggggcttg 480
gagccccaag gcacttcgcc tggggtttgg ttgaccctgc cctntcaagc aatgcctccc 540
ctgtcctggc aaaaagggcc cttgannaaa ttgttgtngg tngggcccaa acaagatnga 600
gccaaacncc ccttnttcgg caccgtttcc ttggcaaaag tgnntnaaag ggaccttttt 660
ccncttctcc aaatntaatt tccccncctt nccttttgg gttttnaa 708

<210> 1337
<211> 419
<212> DNA
<213> Homo sapiens

<400> 1337
cccttagcgt ggtcgcggcc gaggtacgcg ggtgagatac tcccatcaga atccaaacaa 60
aaggactatg aagaaaattc ttgggatact gagagtctct gtgagactgt ttcacagaag 120
gatgtgtgtt tacccaaggc tgcgcatcaa aaagaaatag ataaaataaa tggaaaatta 180
gaagggtctc ctgttaaaga tggtcttctg aaggctaact gcggaatgaa agtttctatt 240
ccaactaaag ccttagaatt gatggacatg caaactttca aagcagagcc tcccgagaag 300
ccatctgcct tcgagcctgc cattgaaatg caaaagtctg ttccaaataa agccttggaa 360
ttgaagaatg aacaaacatt gagagcagat gagatactcc catcagaatc caaacaaaa 419

<210> 1338
<211> 272
<212> DNA
<213> Homo sapiens

<400> 1338
ccctttcgag cggccgcccg ggcaggtact tttttataga agcccaactg gactgacaga 60
tgtcaagggg ttgggggatc ctcagtaggc taacctagca gagttcttgc taaaactggg 120
ctagacaggc cacagacaag atagccaaaa tcaaagccta gttgagaagg gaattcagag 180
gagcatgact aaaatttggt caaggggaga gtctttgtca ccccagcacc tagcacaagt 240
ggttggtacc tcggccgcga ccacgctaag gg 272

<210> 1339
<211> 369
<212> DNA
<213> Homo sapiens

<400> 1339
acgcggggag agacaaaaac agaagagggg aaacatgttt cctactgacg acaggtgatt 60
acacgtgtgc ttctgatgga gggatcagga aaggatatga aaaatcccga agcttaaaca 120
acatagcggg cttgacaggc aatgctctga ggctctctcc agtaacatca ccctacaact 180
ctccttgtcc tctgaggcgc tctcgatctc ccatcccatc tatcttgtaa accaaacaac 240
caaactgcat cagtcggcta aattgtatta attcaagtgc tgtttacccc ataatggaaa 300
taattaaatg tagagttact ccaggctcca ttaatacagt ataaatcttg catgatacta 360
caatttgaa 369

<210> 1340
<211> 517
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 14, 99, 230, 298, 438, 476, 477, 479, 483, 486, 496, 498, 501
<223> n = A,T,C or G

<400> 1340
ccctttcgag cggncgcccg ggcaggtacc actgtgccta gctgaaacat cagtttctga 60
ctgaagtgga gactacaaca actttagtgt ttcccttana aggattacgg ccatggggaa 120
cttgactgag taaacaatgc tataaataaa aagctcttcc aaaacattaa ccatggtaag 180
catcattatc cccataaaat ggtggcatcc aggttaaaat ggcccaccan gaccaaaagt 240
ctaaaatgga agataggaat ccagtccgtt aaactttttt ctgtatctcc atccgggngt 300
gggtcaccaa agggatttac caaatgcctt tcctttagca tttaaatttc aatcctgggg 360
aaaaaatttt taatctcccg ttgccaataa ttcccagtgg agctcttcac ccaatacctt 420
atttcctttt aatttggngg gggggtctgg caaccggggg cctttcccaa aagganncna 480
agnagnggga ttaaangnag naaccttggg ttttttt 517

<210> 1341
<211> 726
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 268, 408, 491, 496, 513, 548, 568, 580, 586, 600, 603, 608, 617, 634, 639, 648, 651, 652, 657, 663, 683, 688, 690, 692, 694, 699, 701, 713
<223> n = A,T,C or G

<400> 1341
ccctttcgag cggccgcccg ggcaggtacc acagacaggc gcaagaggga ggaagaaact 60
ataaaccgaa aaagaaactg acaaacttct ctaattggga atttacatgc agagagtgag 120
agaagataca tctccccata aaaggattga gaggctgtca gattctctgg ctgtgctgtt 180
tggtgaaggt cttcccctat agaaagccag tatgtaaaga ttgagagagg tggctatttt 240
tcaaatgcaa aaatcacaac aaaaaatnac aaggcacaca aagaaacagg gaaatcagtc 300
aaagaaacaa aataaatctc cattaactga ctccgaagaa acagagatct attagttacc 360
tgaaaaagaa tttatgataa tcttaaagaa gctcaatgtg tttcaagnag aataccagat 420
agacagctta aaatggaaat caggccaaac caaaggcatt gaacaggaat tgagggatat 480
tgaacccaag natttnggaa aactttttaaa aanaggaacc caacttggaa atttcttgga 540
gcctgaanaa aaaacaacct gggtttangg aaaaaatttn acttgngggg aagaacccan 600
ccnaaggngg actttgntcc aaccagggga aaanaaatnc agccttanct nnaaaangac 660
canagttcat ttttgaaaaa ttntttgngn tncnggagnt nacccacccc ccnaaaaaaa 720
aaaaaa 726

<210> 1342
<211> 506
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 245, 276, 297, 342, 354, 392, 405, 408, 422, 424, 438, 441, 466, 471, 476
<223> n = A,T,C or G

<400> 1342
ccctttcgag cggccgcccg ggcaggtacg cggggaggca ttgaggcagc cagcgcaggg 60
gcttctgctg agggggcagg cggagcttga ggaaacccgc agataagttc ttttctcttt 120
gaaaggatag agattaatac aactacttaa aaaatatagt caataggtta ctaagatatt 180
gcttagcgtt aagtttttta acgcaatttt taataagctt aagattttta agagtaaaat 240
attgnaatta ctttagaaag gagttagcaa tggagnggaa agggaaaaag gaattanaaa 300

agggtttttc taaaaaacca ttgaccggga agggtttgaa gnattggaaa ggcntttcct 360
tttcattggg aggttaaaaa aaaaactgtt cntttttaaa aaaanggnaa aaaattttgg 420
angnaggaaa aagggaantt nccaaggaag ccccccggaa attttnatta nccccnaaat 480
tacgaaaagg gggcccaatt ggcctt 506

<210> 1343
<211> 417
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 63, 98, 111, 133, 136, 138, 139, 170, 172, 177, 183, 227,
282, 298, 325, 355, 360, 391, 394, 405, 414
<223> n = A,T,C or G

<400> 1343
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttttt tttttttttt 60
acntcattac tttttatttt gaaagatttg tgaaactntt cacatcatgg ngagagtttg 120
tttgattaat aanaancnnc tttttcatag aaatgctttg gaggtgaacn anttctnagc 180
ctntgagaat cccgaccatc ccattaactt tggaagtttc tctttgntta aataggaagg 240
aaacaacagg gggaggggtt gaaaaaaaaa gggagggaac cntgcctaaa aaaccttntt 300
gacaatcatt cccaaatgtt gaggnaaaag aaacaacccc ggattcaccc aaacntcccn 360
cctttttttc ttatttttac caacctttttc ntanaatttt caacnttctt ttgnatt 417

<210> 1344
<211> 628
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 198, 350, 402, 465, 481, 486, 501, 520, 522, 532, 538, 541,
542, 554, 602, 613, 618
<223> n = A,T,C or G

<400> 1344
ggtacgaaag agagacaaaa gggttctctt ggaaacaaga agagtgactc cagatgtggc 60
ctgaataatt gccatgttaa gttaatgcaa aagatcagaa cagggctaca tttgcacagg 120
cagtttctct ccgggccgta gttttcactg atgatcacct ttcacagcat tttccccaac 180
caagcatttc acttaagnct tctctatacc cagcacctcc cccggcaccc ccggcaagcc 240
ccacttatca cttcccgact tccaacgtgg gcattcccgt ggagaatctg gtccacattt 300
agggccgaag ccagggagaa cacttggaga agcagcaggg atggggtttn ggaaaaagag 360
caatgccttt tggggaaaca ccagctttcc tggggaattt cnacattgag gccaaggtcc 420
ttacagaagg agccaaagaa tgcacccccc agggattttc tttcnatttt ttcttaatta 480
natgtngggg aggtggcttc ncattttttc ccccggacan gnggaaattt tncccctnga 540
nnaaaaccga ttancttaga cccccttgggg ttttggcccc acccttttgg taaacttctt 600
tncctttatc ttnccttnct ttttttca 628

<210> 1345
<211> 348
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 340
<223> n = A,T,C or G

<400> 1345
ggtactttac cctgcacaga tgccctcctt gccccactca agctccaaca cctggaactg 60
aatagtcttc ctgtatagat accctcccca ccctacttgg actctggcat ctttgtctgg 120
gtagcttttt cccaaggtgg taggttgctt gataggtgct tagtaaatat catatttgat 180
taactttttg tagcctcctc tttagtctag aaattctaga tcccaaatag aaggtaagat 240
atggtatatt ctggactttt agttttctat atctcctttt caaatacaag acctagggtg 300
acagacaaaa aaatattgtg atcaaagtat atagcatttn ctttcatg 348

<210> 1346
<211> 701
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8, 21, 23, 25, 28, 33, 34, 35, 36, 37, 38, 42, 43, 44, 46, 47, 53, 56, 62, 64, 77, 93, 109, 115, 119, 120, 122, 128, 138, 140, 144, 149, 150, 158, 174, 179, 180, 183, 187, 202, 204, 211, 212, 213, 214, 215, 223, 226, 229, 231, 234
<223> n = A,T,C or G

<221> misc_feature
<222> 242, 247, 253, 256, 257, 258, 262, 299, 306, 308, 313, 319, 322, 356, 371, 372, 373, 385, 396, 398, 399, 407, 408, 411, 415, 422, 425, 433, 439, 442, 447, 449, 451, 452, 456, 460, 461, 462, 464, 472, 474, 484, 486, 488, 490, 491, 492
<223> n = A,T,C or G

<221> misc_feature
<222> 496, 497, 499, 502, 505, 506, 509, 533, 554, 557, 558, 571, 573, 588, 594, 599, 601, 602, 603, 604, 609, 611, 620, 627, 645, 648, 652, 660, 662, 663, 690, 696
<223> n = A,T,C or G

<400> 1346
ccctttcnag cggcccgccc ngncnggnac ttnnnnnnca cnnncnntat ggnctnagaa 60
angngggccc cattttncac cctagctaca aanggggtgag tttgaaaant atgtnagann 120
anctggangc tcaggggncn gatnctctnn tggataanac cattcaaagc caanggtcnn 180
gangccnacg agcccatact gntnataaat nnnnnccaaa aantgnccnt nttntttggg 240
gnccgcngag ganatnnngc cntggggcta accaaaatat taaatagcgg tccttgaang 300
tgtacngngc ccnggcggnc gntccaaagg gcgaattcca acacactttt aaaaantact 360
acccggatcc nnnctctttt caatnttggc ctaatnanng ttttagnngt ntaangaagg 420
anaanttttt ttnccgggnc tnaaaantng nngggntttn nngnaaaaaa anantttttt 480
tccnananan nntttnntnt tnggnnccnc cccaaaaaaa aaaaaaaggc ccngttttcc 540
ccttgggggg gggntcnnaa aaaatctttc nanttttttt tttttttnga aatnaaggnt 600
nnnnnccccng naaacccttn aaaaaanggg gtttttttaaa aaaanccncc gngggggaan 660
tnntttaaaa ttttaaaaaa cctttttaan gggggngttt t 701

<210> 1347
<211> 245
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 28, 53, 56, 69, 86, 87, 93, 107, 127, 128, 159, 167, 181, 182, 189, 202, 205, 206, 207, 222, 232, 233
<223> n = A,T,C or G

<400> 1347
ccccttnggcc ggccgggcag gtacatcngt cccttgacca ttacacccac ggnggnccta 60
attggcctnt ctggtttcca ggcatnnggg ganagagcct ggaaacnctg gggcattgcc 120
atgctgnngt ggaaacatat cccctcatcc caccactgng gggcatnctg taggaacatt 180
nncagactnc atgagataat gnttnnnaat aataacaatg gnctgacagt tnnaacttta 240
tttgc 245

<210> 1348
<211> 697
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 35, 55, 63, 70, 92, 103, 108, 109, 116, 119, 123, 126,
131, 133, 136, 140, 141, 158, 178, 191, 192, 195, 198, 201,
213, 216, 226, 230, 250, 256, 262, 268, 275, 294, 298, 301,
304, 308, 333, 339, 342, 344, 355, 358, 374, 382, 385
<223> n = A,T,C or G

<221> misc_feature
<222> 389, 398, 402, 410, 415, 423, 448, 465, 468, 479, 485, 487,
494, 496, 511, 517, 524, 529, 535, 539, 556, 558, 574, 576,
582, 588, 590, 600, 602, 622, 625, 635, 636, 643, 644, 654,
656, 662, 686, 693
<223> n = A,T,C or G

<400> 1348
ccaggttact tgaaatnata tgggtatcaa agtanccatt ggagaaactt gtggnaatgt 60
ctntggtggn atctgtaaaa agaagatttc ancttagctc atngggcnng gggcangang 120
aantanagga nantgnaatn ngggacagaa aaattacngc ctggacttac cagattgngc 180
ttggcatttt nncgnctnag naggggcccc ttnaanaata attttncttn tcctggtgat 240
tacaaggggn aaaaanaatt tngtacanaa taagnggaag ggccataaaa attnggcnaa 300
ngcnttgncc acaagaggaa ccatttatat tanaacaant tnanccaggt aaggntgnaa 360
gaaatttgg aatnttcctt anaanaaant tgggtttntt tnattgggtn aaaanaaaat 420
tanttttttaa aatttttttt attaaccntc cattttggag gttanttnac caaaataana 480
gtggnanatt aatntncctt ccttttaaaa naaattnccc acanttatna ttcanattnt 540
acttttttttc ccaaantntt caccacaaaa aaantnggga angttaanan aaaaaattan 600
tnattggtct cccttttttt tntangggga ataannaaat tgnntccagg gganannttaa 660
anaattggaa ttaaaattac cacttncaat tantttc 697

<210> 1349
<211> 429
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 31, 46, 47, 51, 54, 55, 57, 59, 60, 63, 66, 67, 70, 73, 75,
78, 81, 84, 87, 90, 99, 122, 123, 129, 130, 131, 141, 153,
154, 155, 157, 158, 170, 186, 187, 199, 217, 218, 232, 243,
254, 257, 268, 270, 273, 277, 288, 299, 303, 308, 310
<223> n = A,T,C or G

<221> misc_feature
<222> 316, 317, 318, 324, 326, 329, 340, 360, 364, 368, 373, 382,
383, 386, 387, 389, 398, 402, 404, 405
<223> n = A,T,C or G

<400> 1349
ccctttcgag cggccgcccg ggcaggtact nttttttttt tttttnnccc nccnnantnn 60
canttnnttn ggngnacngt naanggncgn gccaaaatna agaaagcacc ctttttttcca 120
annaaagann nccattaaag ncccacgtcc atnnncnngg ggtacttggn taaaaaataa 180
acaaannttt taactgggnt tggaaaaaaa aaaaacnnag ggtcccccag gnaaaaggca 240
atnttttttt tttntcnaaa aaaagcgnan gtncccntaa gtttgccnat aaaaaaggna 300
ggncccengn aagggnnncc ttgngnggna aaaaaccctn tttttttaac cctacgggtn 360
aaanaaaantt cangaaattt anntgnngna aacatggnct tngnnaaaac gggccgggga 420
aaaaagggg 429

<210> 1350
<211> 437
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2, 39, 44, 45, 59, 70, 73, 142, 151, 158, 185, 214, 220,
245, 247, 294, 302, 306, 313, 319, 321, 322, 324, 326, 331,
335, 340, 347, 348, 352, 355, 357, 365, 369, 370, 371, 373,
374, 382, 407
<223> n = A,T,C or G

<400> 1350
anaattcgcc ctttcgagcg gccgcccggg caggtacana aaannatggc ctgccaaanc 60
tttttttttn ttnttccagg aaaaacaggc cacaaatgaa tggtgtatta cagattgtac 120
acacatgaag agaaggtaat ancgcactgc naagcagncc ggctctgggg aagaacttca 180
cgganccccct tcttagagca gggagggggc tttntcaaan aaatgttgag gctttctgct 240
gcctngntct gccccaggcc cccctccagg gtacctcggc cgtaaccaca ctangggcga 300
antccngcac acnggcggnc nnancnacgg natcngatcn tgggccnnga cntgngngaa 360
aaaanggcnn nanntccttt cntggcacca actatgatgt ctttganaaa gatatgcttg 420
ggggcctggg aaattga 437

<210> 1351
<211> 209
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 6, 20, 22, 24, 27, 35, 50, 53, 59, 60, 61, 68, 72, 78, 81,
89, 91, 109, 116, 119, 123, 125, 126, 134, 140, 141, 154,
155, 161, 168, 173, 176
<223> n = A,T,C or G

<400> 1351
cccttnccag cggccgcccn gncnggnact cgatnaaaag tttggaggcn tgncacaann 60
ntggaaanaa tntaatgntg nattgactnt ncagggttct attaatgana acacantcna 120
acnannttttt gatntattan nacagatgta taanncctat natttttnaa atnagnatcc 180
acctgacatt tatctctcat tccatcagc 209

<210> 1352
<211> 429
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 9, 13, 15, 29, 31, 33, 41, 43, 44, 47, 53, 60, 61, 64, 65,

77, 78, 80, 81, 82, 88, 89, 90, 92, 102, 104, 107, 109,
110, 111, 113, 121, 125, 132, 135, 145, 151, 152, 160, 171,
172, 176, 179, 186, 187, 194, 197, 198, 199, 201, 204, 205
<223> n = A,T,C or G

<221> misc_feature
<222> 206, 214, 223, 227, 229, 237, 245, 246, 250, 251, 257, 258,
259, 260, 264, 269, 284, 286, 289, 290, 291, 296, 304, 305,
309, 315, 317, 318, 322, 327, 337, 338, 344, 345, 346, 359,
369, 375, 378, 381, 382, 384, 386, 393, 418, 422
<223> n = A,T,C or G

<400> 1352
cccttagcnt ggncncggcc gacgtactnt ntnttttttt ntnntgntaa agnaaggggn 60
nccnncctat aaacccnngn nngaatcnnn gnggccacct tngnggncnn nangctccta 120
ncccnaggga anaanccaat gttcnggact nncccccccn aaaaaggggg nntaanggnc 180
cccccnncct tccnggnnna nttnnnattt tttnacaaaa aangggntnc cccattnggc 240
cgggnnggan ntaaaannnn aaanaaaant tcccccccg ggangnccnn naaaanggtg 300
gggnntaana gctgntnncc cnccctnccg gggggannca aaannncctt tttagggang 360
gggccttcnt ttggnccnaa nntntntttt tgnaaaaggc ccctaaaatt tttcccanaa 420
ancttttt 429

<210> 1353
<211> 338
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 139, 287, 312
<223> n = A,T,C or G

<400> 1353
nccccttagcg tggtcgcggc cgaggtacta cagaggacat agcagtatta agggataatg 60
aagtcacagc ttcagagcct ccatcctttc tttagcaagt tagctctact tgtatctgtt 120
ctgttttata taatatggnt gcatctaact gtttttaaaa aaagttctgt tcttcaaaaa 180
aattttaagc tatgaaaatc actgattaag tcaaaccctc attttacaaa agaggcaaca 240
caaactcaga gcacttatgc ctcaccatag gtcacaaagc caagtanctc caggccagaa 300
aatgggcttt angtcttccc gtctgagact ggcatttg 338

<210> 1354
<211> 143
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 34, 55, 60, 64, 66, 70, 75, 77, 83, 86, 91, 92, 98, 100,
102, 103, 106, 110, 120, 123, 128
<223> n = A,T,C or G

<400> 1354
cccttagcgt ggtcgcggcc gaggtaccgc ccantctttt acatggtgat ggganacacn 60
cttnangcan acttnangtc tanttntgcc nncataantn tnnctnaacn gatttacggn 120
acnctccncc agatttcata att 143

<210> 1355
<211> 652
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 44, 45, 46, 48, 51, 52, 55, 66, 68, 69, 72, 73, 75, 77, 79,
83, 85, 87, 88, 97, 98, 101, 102, 104, 109, 119, 120, 128,
130, 142, 148, 149, 150, 151, 153, 159, 160, 164, 168, 183,
190, 196, 197, 202, 211, 216, 220, 223, 224, 225, 226
<223> n = A,T,C or G

<221> misc_feature
<222> 227, 230, 232, 233, 250, 252, 256, 259, 260, 261, 270, 271,
274, 279, 284, 288, 289, 290, 293, 296, 297, 298, 299, 301,
306, 317, 318, 322, 324, 325, 326, 328, 331, 333, 338, 339,
344, 345, 352, 358, 359, 361, 366, 371, 372, 373, 377
<223> n = A,T,C or G

<221> misc_feature
<222> 379, 392, 395, 398, 399, 411, 413, 426, 427, 437, 440, 442,
444, 452, 458, 464, 465, 472, 474, 480, 490, 492, 505, 510,
520, 524, 529, 535, 542, 548, 549, 550, 551, 554, 558, 560,
571, 573, 580, 581, 583, 588, 596, 597, 612, 616, 617
<223> n = A,T,C or G

<221> misc_feature
<222> 626, 633
<223> n = A,T,C or G

<400> 1355
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ccccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttnnnantt nnccnttggc 60
cccccngnng gnngncnang ggngnanncc aacctanngg nnanatttnc cccccgggnn 120
aaaaaaantn cccccccccca anccccccnnn nanggggggnn taangggncc cccccccccc 180
ccnaaaaaan ttttgnnttt tnaaaaaaaa nggggntttn ccnnnnnggn cnngggggggt 240
ttaaaacccn gncccnagnn naaccccccn nccnaaccnt gggntttnnn ttnttnnnna 300
nttttngggga acccccnngg gntnnnncnaa nanttaanng ggtnnggggc cnaaaaanng 360
nccccngggg nnncccnang ggcctttttaa anggnccnnc caaatttttt ngnaaacccct 420
cttttnnaac ccaaaanggn cntnaaatta angggggngg gggnncccca ancntaagan 480
gggggaaagn gncccttttta ccccnctttn taaaattttn tttnaaccng gggcnaaaaa 540
gntttttnnn naangggnan ccaaattttt ntnttttttn nanaaaantt ttcccnngaa 600
aaaaaaaaaa anacgnnggg gaaaanaccc ggngtttaga aaaaaaaaaa aa 652
```

<210> 1356
<211> 174
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 55, 57, 59, 61, 67, 69, 75, 76, 78, 79, 83, 87, 88, 98, 100,
102, 109, 110, 111, 119, 124, 125, 127, 128, 132, 139, 140,
165
<223> n = A,T,C or G

<400> 1356
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cccttagcgt ggtcgcggcc gaggtacttt tttttgttt tttttttttt taaancntng 60
naaaatntnt ttttnntnnc ccnggannaa acccaccntn tnttagggnn naaataaant 120
aaanncnntc cngtttttnn ttttaatccc tttaaaaaag ggaancaaaa aaaa 174
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<210> 1357

<211> 331
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 53, 54, 55, 57, 59, 62, 63, 70, 74, 75, 76, 88, 90, 91, 92, 97, 110, 112, 113, 116, 128, 132, 134, 135, 136, 137, 139, 142, 147, 151, 156, 157, 160, 161, 162, 163, 166, 172, 173, 175, 181, 183, 190, 195, 199, 202, 209, 212, 213, 215
<223> n = A,T,C or G

<221> misc_feature
<222> 221, 230, 231, 239, 246, 255, 257, 268, 281, 282, 295, 299, 313, 316, 327
<223> n = A,T,C or G

<400> 1357
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt ttnnnangnc 60
cnnaaggggn aaannntttt ttaaaaancn nnttttncca aaattttggn cnnaanttcc 120
cttttaantt tncnnnntng gnaaaanggg nttttnnccn nnnaanccta anntnaaggg 180
ncnaaatttn ttttnaaant tnaaaaaanc cnncnaaaaa nctttaaaan ntttccccng 240
ggggcntttt ttccntnccc caaaattnta aaaagggcct nntttttaaa ggaantttna 300
aaaaaggggg ggnccngatt tttttnttt t 331

<210> 1358
<211> 128
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 10, 12, 14, 18, 20, 21, 23, 37, 39, 43, 46, 54, 56, 72, 73, 75, 77, 78, 99, 101, 113
<223> n = A,T,C or G

<400> 1358
ngtactgatn tngnctgncn nanaggaatg tataatntna ggncgnccct tatnangcat 60
gatgctttaa anncntnnta caagtaactt tttaaaacnt nccctgaaac aanatgaggg 120
gacccatt 128

<210> 1359
<211> 579
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 199, 224, 230, 303, 319, 321, 343, 351, 361, 376, 378, 411, 413, 418, 427, 453, 460, 475, 495, 496, 502, 503, 505, 509, 529, 537, 540, 542, 552, 561, 566, 568, 571
<223> n = A,T,C or G

<400> 1359
cccttagcgt ggtcgcggcc gaggtacttt cccacattcc gggttgaaga gagcctttca 60
aaagcatcaa agatggttcc acaatgttca catgtccact ccttttattc tcttctttcg 120
gcatgaagtc acttgagaag gatgaatttg tttggaggaa tgctactttc aaatcctata 180
tggggaggta tgatttttna ttttttctaa ttcttttctc ttanattaan tttttatcca 240
aaactttgtg aaaatgaatg ggagcctaaa aaataccttg aaattcttgg gaattcattt 300

cangtccacc cattggatng ntttttccct aaatgggggg gcnttccccc naggggaggc 360
natttccttt taattncnct gaatttattg gaggggtttt tttgggttaa ncnccaanga 420
aaggggnctt aaaaaaaccc caaaatttgc ctngggtggn ctttttggc cttanaccct 480
tcgggatggg ccccnnggga annangggnt tcaacccggg tttttttana aaaaaangtn 540
gnaaaatgtc cnattttcca nggggnanta ntttttttgg 579

<210> 1360
<211> 442
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 73, 78, 119, 121, 131, 175, 218, 229, 275, 288, 319,
331, 335, 347, 379, 388, 413
<223> n = A,T,C or G

<400> 1360
cgcggggagg cattgaggca gtcagcgcag gggcttntgc tgagggggca ggcggagctt 60
gaggaaaccg canataantt tttttctctt tgaaagatag agattaatac aactacttnc 120
naaaatatag ncaataggtt actaagatat tgcttagcgt taagttttta acgtnatttt 180
aatagcttaa gattttaaga gaaaatatga acacttanaa aagtagcant gaggaaggaa 240
aagataaaag gtttctaaaa acatggaccg gaggnttgaa gatgaaanct tcttcatggg 300
agttaaaaaa atgtatttna aaagaaaaat ntganagaaa ggggctncca ggagcccccg 360
gaattaaata ccaaataang aaggggcnaa tggcttttaa gattaaaaat ggnagggtga 420
ctcaaaacag cttaaaagtt tt 442

<210> 1361
<211> 442
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 37, 73, 78, 119, 121, 131, 175, 218, 229, 275, 288, 319,
331, 335, 347, 379, 388, 413
<223> n = A,T,C or G

<400> 1361
cgcggggagg cattgaggca gtcagcgcag gggcttntgc tgagggggca ggcggagctt 60
gaggaaaccg canataantt tttttctctt tgaaagatag agattaatac aactacttnc 120
naaaatatag ncaataggtt actaagatat tgcttagcgt taagttttta acgtnatttt 180
aatagcttaa gattttaaga gaaaatatga acacttanaa aagtagcant gaggaaggaa 240
aagataaaag gtttctaaaa acatggaccg gaggnttgaa gatgaaanct tcttcatggg 300
agttaaaaaa atgtatttna aaagaaaaat ntganagaaa ggggctncca ggagcccccg 360
gaattaaata ccaaataang aaggggcnaa tggcttttaa gattaaaaat ggnagggtga 420
ctcaaaacag cttaaaagtt tt 442

<210> 1362
<211> 495
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 13, 15, 18, 20, 21, 22, 34, 65, 67, 68, 69, 81, 89, 97, 101,
105, 106, 120, 121, 123, 134, 135, 136, 139, 140, 141, 146,
147, 153, 157, 162, 166, 181, 183, 190, 213, 220, 222, 226,
227, 228, 232, 258, 259, 269, 270, 271, 272, 277

<223> n = A,T,C or G

<221> misc_feature
<222> 279, 281, 294, 307, 310, 313, 314, 315, 316, 317, 319, 324, 325, 337, 350, 351, 352, 353, 358, 359, 360, 361, 362, 365, 366, 368, 385, 392, 398, 402, 411, 412, 429, 434, 439, 442, 459, 460, 465, 467, 468, 469, 470, 477, 478, 493
<223> n = A,T,C or G

<400> 1362
agcggccgcc agngngangn nnttcggggg aatnaaaccc agcgcggccg cggccgaggg 60
acagngnnna aaaagtgtac ngaaacaana aagcagncaa ncagnnaaac cccagagaan 120
ncngcagaaa aaannnatnn nctagnnacg ggnaggnaac cncacnaaaa tgtggaccgc 180
ntnttacccn gaaaggaaaa aaaccccccg canacaaccn cnacannnca gncacgcaac 240
cacagggcaa agagaaanna agctccacnn nnaaaananc ngaagcaggg gggnaaaagg 300
cccgagnggn cannnnncng aaanncagag aagcaancaa agggcagaan nnnggcannn 360
nnccnnanag aagcaggggg gagcnaagga gnggccanca gngaggcacc nngccccaac 420
aggaacccng gggnaagana angggaggga ccgcagccnn gaaanannnn caccccnnaa 480
gccaccgggg gcngg 495

<210> 1363
<211> 360
<212> DNA
<213> Homo sapiens

<400> 1363
ccctttcgag cggccgcccg ggcaggtaca gtcagggttt tgtcatgttg tttaggctgg 60
ttttgaaccc ctggactcaa gcaatccacc caccttggct tcccaaagtg ctgggattat 120
aggcatgagc cactgcaccc agccaattct ccaaatctca cagccaaact gcaactaaat 180
tccatctcaa acaaatattc aaatgcagaa gactcaccca tctaatcaag gcagttttaa 240
tatttagggg aaaaaaaatg cctggataaa actgtaaaac caagcatgat agaaagagat 300
acttttagga atgggggagg ggatgacaaa aataaaacga gaaggtagat aagaatggaa 360

<210> 1364
<211> 445
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 173, 340, 342, 403
<223> n = A,T,C or G

<400> 1364
cccttagcgt ggtcgcggcc gaggtacttt ttttctttct tttttctttt tttttttttt 60
taacaggaat caagtaaaaa ccacagaacc tctatattta tatttgagtc tgaatcaaac 120
attttcacct ggaagaattt tttccaaagg aggggaaaac aactgtttct gantgccttt 180
attttaggtt aattttttca aaagattatc tctgacacct ttgcattaag tatctaatgt 240
attagtggga ctccatggtt tgcatttatt tcttcaattt gctaaaaaaa aaaaaaagtc 300
tactaaaatt tcaattttttg aaaagcaatt aattagaatn tnttagataa agcaaaatgt 360
aataaactct tcacttattt tttggatgga ggtcctactg gtnataagat ttcaagttaa 420
attttcctaa attgcccttt tttaa 445

<210> 1365
<211> 149
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 30, 32, 71, 72, 75, 77, 80, 85, 87, 89, 90, 91, 92, 101
<223> n = A,T,C or G

<400> 1365
ccctttcgag cggccgnccg ggcaggtacn cngggtgtga cccgagcggt aacatccaga 60
aaggatttcc nncananacn gcgcngntnn nnagctgcag nttgccccac cctgatccag 120
tctccctcat ttacagcctg gaaattgat 149

<210> 1366
<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 207, 231, 243, 261, 289, 311, 325, 329
<223> n = A,T,C or G

<400> 1366
cggggaggca ttgaggcagc cagcgcaggg gcttctgctg agggggcagg cggagcttga 60
ggaaaccgca gataagtttt tttctctttg aaagatagag attaatacaa ctacttaaaa 120
aatatagtca ataggttact aaagatattg cttagcgtta agtttttaac cgtaatttta 180
atagcttaag attttaagga gaaaatntga aagactttat aagagtagca ntgagggaag 240
ggnaaaggat aaaaaggttt ntaaaaacat gaacgggagg gttgaggang aaagccttct 300
tcatgggagt naaaaaaaaa tgttntttna aaaa 334

<210> 1367
<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 207, 231, 243, 261, 289, 311, 325, 329
<223> n = A,T,C or G

<400> 1367
cggggaggca ttgaggcagc cagcgcaggg gcttctgctg agggggcagg cggagcttga 60
ggaaaccgca gataagtttt tttctctttg aaagatagag attaatacaa ctacttaaaa 120
aatatagtca ataggttact aaagatattg cttagcgtta agtttttaac cgtaatttta 180
atagcttaag attttaagga gaaaatntga aagactttat aagagtagca ntgagggaag 240
ggnaaaggat aaaaaggttt ntaaaaacat gaacgggagg gttgaggang aaagccttct 300
tcatgggagt naaaaaaaaa tgttntttna aaaa 334

<210> 1368
<211> 430
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 16, 129, 150, 157, 230, 234, 238, 266, 267, 273, 280,
298, 308, 353
<223> n = A,T,C or G

<400> 1368
nccttagcgt ggtcgnggcc gaggtacaga caggcaggct cccagtgtga gaagtgcctt 60

```
taggacaagt agaactgcac acatagatgc aaatgcctgg gcctttcttc aggttctgtc 120
atagaacana ctgcctgagg ccatgctcan gactgcnggc ctcagaaacc cagcacttgc 180
ccctgctctg tctttctgct cccagcagct gaattctagg gaaatgtctn tccntcancc 240
cacccccgaga caaacctgcc aagctnntgg ctntcaaatn cttttgccca tgactgangt 300
cccatcancc cttttcccca atatgagaat agcttgttcc acccctccaa gtncagcaag 360
gcatggggat aactggaaag gctgttacac ctgtatgctc tcctgctccc taagcctgcc 420
tcaaaacatg                                                        430

<210> 1369
<211> 432
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 293, 354, 374, 378, 424
<223> n = A,T,C or G

<400> 1369
ccctttcgag cggccgcccg ggcaggtacc aacagaaaca gaaataactg agcaaccgaa 60
ccaccaatag agctcttaga ttaagaacct tggttcaagg aaggagtttt gagcaggtgc 120
tggacagaaa gactgagaac tctatgatgt aaatgagagc cctgtgataa gccaatcagc 180
ctgctgtggc ctggaactga ttgatcatgg gccaggaagg agcacagagg ggtaacctgg 240
caaagaacaa aggaagaggt agccactggc ggagaatgac taggacagaa gangcccaga 300
agagagctag gactgggaat caaatttaca tatggatgtc taagaaaact ttangttcac 360
aatgaggctt cttnttangc ataacctgca gatgatcaag aatgcttttt tttgcttggt 420
tggnttctaa at                                                     432

<210> 1370
<211> 607
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 256, 349, 387, 390, 411, 421, 424, 426, 434, 457, 468, 472,
493, 498, 512, 527, 529, 533, 534, 540, 543, 550, 557, 561,
563, 567, 580, 593
<223> n = A,T,C or G

<400> 1370
ccctttcgag cggccgcccg ggcaggtaca ctctttcttg gtcatgtggc ttccctgttt 60
cttcacaatt gcagctacat tccctctcaa tgctctgaaa gtgtgggtgc ctctcccccct 120
ttagttctgg ctgtagacag tggtttggca ctcctaggct gtctactgca gctctgggtg 180
atcaatctaa tgtttatgtt ccttccccag cttgtttgca gcagaggaag gaaccttagt 240
agtggtcatg gccaanggtc ccttgctcat ctcctgggga ctccactcta gagatacaca 300
ggtcagcaat tgttttggtg caatcaagcc tagggatgga gggtctgtnc tgtgggccca 360
aaccaagggg gtccctgtct gatgatnaan caatggaagg gttgttgtgg naaccacatt 420
nggnanaggg gacntggcct tctttctccc ttggggnttg aattgcancc cntgtttgga 480
aagtggtggg atnaaaangc accgttgggg gnctttttgat tcttttngnt aanncccctgn 540
aangggtaan ccaaaanaac nantttntac ttgcaaaaan gcaattgggg canaaaaaag 600
ggtttt                                                            607

<210> 1371
<211> 144
<212> DNA
<213> Homo sapiens

<220>
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<221> misc_feature
<222> 24, 30, 117
<223> n = A,T,C or G

<400> 1371
cccttagcgt ggtcgcggcc cgangtactn tttttttttt tttttttttt tgtctgggtg 60
gtgacagctc atgataattc ataaagttgt atactatgat ttgtgcatat tggatanata 120
cgtcatagtt cactttaaaa gttt 144

<210> 1372
<211> 557
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 218, 243, 248, 277, 280, 291, 320, 322, 344, 345, 367, 375,
384, 388, 437, 439, 441, 454, 478, 488, 511, 514, 527
<223> n = A,T,C or G

<400> 1372
ccctttcgag cggccgcccg ggcaggtaca attccaggag cttccctgta attcctcaaa 60
aaagcactag taaaactctt aggaggatat tagataaagc tcacttagca atagcccttt 120
ttccccacat attctggaag gttctataaa agctattaga tactcattcc tggttctgga 180
aaattaaata agccaattct tggtaggatt ttccaaangg cttaccacag gagggatttt 240
atncctcntt tttgaaaaat attttcatcc cattaanagn aataaggaaa ncttcttgcc 300
ctttcaataa gccatttttn anaggccttt cctggttatt tttnnttggg ggaccaaaaa 360
aaaattngtt cttanaaacc aagnaaantt taagaattct ttcccagggg tccttcaaaa 420
aaaggccacc aaaggangna ntatttattc caanggagga aaaaattctt tgggaagntt 480
aaaaaccnca aaaaccaaaa aaaattcttg ntanaaaaat ggtgggngaa aaattggtac 540
aatttcttcc cttttcc 557

<210> 1373
<211> 389
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 49, 50, 56, 57, 59, 67, 71, 72, 77, 79, 81, 83, 87, 88,
91, 93, 98, 108, 110, 112, 130, 133, 135, 140, 148, 152,
154, 162, 230, 255, 260, 277, 282, 287, 309, 313, 316, 320,
333, 335, 347, 356, 361, 365, 371, 375, 376, 377
<223> n = A,T,C or G

<400> 1373
ccctttcgag cggccgcccg ggcagggact tatttatatt ttatttntnn cattgnntnt 60
ttaaggnttg nnattgnant nantttnnaa ntnaattnta actgtttncn gnttttttcaa 120
tgtgtttatn tantncatcn gattttgnac tnancgagcc tncacaatta tgtcaaaaag 180
ctaatatgtt tgagaaccat ctatttaaag aacagcaagt ttggaccaan aaataaagac 240
caacggtgaa agcangcaan ccccagaaat aactagnaaa antgctnaaa aggaggaacc 300
ttttacttna tanganaatn aaaccatttg acngnaaaac ttttttnaac actaanattt 360
ntatnttttt naaannnacc ttttttttt 389

<210> 1374
<211> 385
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 33, 74, 164, 298, 333, 342, 353, 372
<223> n = A,T,C or G

<400> 1374
cccttagcgt ggtcgcggcc gaggtacttt ttntctttct tttttctttt ttttttttta 60
acaggaatca agtnaaaacc acagaacctc tatatttata tttgagtctg aatcaaacat 120
tttcacttgg aagaattttt tccaaagggg gggaaaacaa ctgnttctga gtgcctttat 180
tttaggttaa ttttttcaaa agattatctc tgacaccttt gcattaagta tctaatgtat 240
tacgtgggac tccatgggct gcatttattt cttcaatttg ctaaaaaaaa aaaaaagnct 300
actaaaattt caatttttga aaagcaatta atntgaaata tnttagataa gcnaaaatgt 360
aataaactct tncactattt ttttg 385

<210> 1375
<211> 461
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 5, 14, 71, 74, 85, 142, 157, 168, 210, 211, 256, 262, 271,
275, 279, 281, 294, 323, 324, 331, 345, 352, 371, 374, 389,
391, 396, 398, 400, 415, 419, 420, 428, 429, 447, 456
<223> n = A,T,C or G

<400> 1375
accgngcctg cctntcaaga taccccatcc tctccacgcc gctgccgctg ccgccatgca 60
aggggaggac nccngatacc tcaanaggtg acgactcccc aacggctctg tcctaccctc 120
cttgccaggg ccctgaagat gntcttgggt ttgctgngag atgtcacntg ggcaaacgct 180
tagcttattc actacgggat ggggaaagcn nggagagtaa gttcactcgg aatagggagg 240
aggggaaaag gtgaanatgg gncaaaaaaa ngagnagcnt ntgggggggt tttnaaaagt 300
ccctttgacc ttgaactcgg cgnnatcccc ntttcagcct ttganaaaga tnggggttcc 360
tttccgctta ncantcaacc ctttaattna ncaagngngn gaagaagggg aaggnttann 420
tggccaanng gtaaaaaccc ccccgcncct ttttgntttt t 461

<210> 1376
<211> 323
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 49, 50, 51, 72, 74, 75, 76, 79, 80, 82, 83, 86, 92, 93, 99,
100, 101, 102, 106, 117, 118, 121, 122, 126, 134, 141, 147,
149, 152, 161, 163, 167, 170, 174, 175, 181, 182, 186, 187,
188, 198, 201, 202, 204, 205, 212, 213, 214, 217, 219
<223> n = A,T,C or G

<221> misc_feature
<222> 223, 231, 232, 238, 243, 255, 280, 283, 289, 298, 304, 311,
315, 320
<223> n = A,T,C or G

<400> 1376
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt ttttttttnn nccccttttt 60
tttttttttt tncnnnaann tnnttnaaaa annaaaaann nntttnccca aaaaaannaa 120
nncccngggg aaanggggcc ngggggnana anttaaaaaa nantttnaan cccnnccccc 180
nntttnnntt taaaaatntt nnanngggggg cnnnccntnt canaccttgc nnctgggntt 240

atnaatttac tgccnttcca ttgtattgag gtccctgaan tcntggatna ccagaaangg 300
ggantttttaa nattncattn aat 323

<210> 1377
<211> 546
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 288, 293, 302, 330, 357, 399, 400, 418, 422, 426, 438, 442, 446, 455, 464, 502, 511, 527
<223> n = A,T,C or G

<400> 1377
acttcatgaa cgccaggaaa gccttcaggc tatcctcaac agaatggagg aggttcacaa 60
ggaggcaaac tctgtgctgc agtggctgga atcaaaagag gaagtcctga aatccatgga 120
tgccatgtca tctccaacca aggacagaaa cagtgaaagc ccaagctgaa tctaacaagg 180
ccttcctggc tgagttggaa cagaattctc ccaaaaattc aaaaaagtta aaaggaagcc 240
ctggctggat ttactggtgg acatatccca actcacaggg aaaaaagnat tanaatgctt 300
tntggttacc ttggcccgcg gacccaccgn ctaaggggcg aaattccagc acactgngcg 360
gcccgtttac tagtgggatc ccgaggctcg gttccaaann ctttgggccg taaatcantg 420
gntcantagc ttgttttnct gntggngaaa aattngttta ttcnccgctt caccaaattt 480
cccccaccaa ccattaaccg angccccggg naaaggccat taaaaangtg gttaaaagcc 540
cctggg 546

<210> 1378
<211> 471
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 163, 271, 274, 286, 302, 319, 323, 336, 340, 347, 356, 391, 402, 444
<223> n = A,T,C or G

<400> 1378
ccctttcgag cggccgcccg ggcaggtaca ttgaagctgc ttaaataacc cagtatctga 60
aaagctgtcc tcttaacatt gcattaataa caatataagc tcaattttaa atgatgaaat 120
atttcaccct ccctagtttc tgattttggc ctctggagta atnttaactt gatcagtaaa 180
cacacacatt acatacatac attattacac acaccaaagg tttcattcat tatttaagca 240
aggagaatcg gattacccct tgtgttaatt natnattaag gaaaanttcc aaaaaaaggt 300
cnaaacctcc agttaggcna tgncttaatg gaaaantaan ctaagtnatt tcaaanaatc 360
caaaaagggt gggaaaaaat ttcaagccca ncttgggggg gnacccccttg aaaaaggggt 420
ttcccttcac ttttcccctt aagnaaatta ttattaacca tttttgggaa a 471

<210> 1379
<211> 788
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 96, 132, 323, 400, 466, 480, 494, 497, 500, 502, 504, 527, 532, 534, 543, 570, 582, 597, 601, 605, 630, 647, 648, 654, 663, 668, 686, 702, 714, 728, 730, 734, 738, 740, 743, 744, 749, 764, 765, 766, 773, 778
<223> n = A,T,C or G

<400> 1379
ccccttagcgt ggtcgcggcc gaggtactgc tcggaggttg ggttctgctc cgaggtcgcc 60
ccaaccgaaa tttttaatgc aggtttggta gtttangacc tgtgggtttg ttaggtacgc 120
gggggagtc tncaggatgg caccggaccc ctggttctcc acatacgatt ctacttgtca 180
aattgcccaa gaaattgctg agaaaattca acaacgaaat caatatgaac gaaaaggtga 240
aaaggcacca aagcttaccg tgacaatcag agctttgttg cagaacctga aggaaaagat 300
cgccctttg aaggacttat tgntaagagc tgtgtcaaca catcagataa cacagcttga 360
agggggaccg aaaacagaac ctctttggat gatcttgtan ctcgagagag actactttct 420
ggccattctt taagaatgag ggtgccgaac cagatctaat caggtncagc ctgattagtn 480
gaagaggcta aacnagnagn ancnaaaccc ttggcttttt ttagggngcc cncnggaaga 540
ccnagaaggc tttgggtttt gattaaaatn cgggcaacaa gnaggcagaa aaaattnttc 600
naaanaacaa ggatgccaag ccctttgatn ccccttttcc ttttatnnaa aaangttggc 660
canaaaanaa aattgggggg caaggnaaat ttggggaatt tnaatttggg attnaaccaa 720
aaatgagnan taantttngn ccnnccttnc ccaacctttt gggnnnaaaa canaattnaa 780
aaaatttt 788

<210> 1380
<211> 334
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 54, 55, 59, 61, 62, 63, 64, 65, 66, 75, 79, 80, 85, 89, 90, 91, 92, 93, 98, 99, 103, 107, 108, 112, 115, 116, 119, 122, 129, 131, 132, 136, 138, 139, 141, 142, 145, 146, 151, 152, 155, 156, 158, 161, 167, 169, 170, 171, 172, 173, 182
<223> n = A,T,C or G

<221> misc_feature
<222> 193, 194, 195, 211, 212, 225, 226, 231, 236, 240, 244, 248, 250, 258, 268, 269, 270, 271, 282, 288, 289, 290, 293, 296, 298, 303, 314, 334
<223> n = A,T,C or G

<400> 1380
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttttt ttannggggnt 60
nnnnnntttt ccccngggnn gtttnaaann nnngggcnna aanaaanncc cnaannaanc 120
cnttaaaang nngggnanna nnggnnaaaa nnaanncnaa nggcccnann nnnttttttt 180
tnaaaccaaa aannntttaa aaaaaaaaaa nntttttttt ttaannaaaa ntaaancccn 240
gaangggntn cctttttncc cccggggnnn ngaaaaaaaa cnccttannn ccnttnanac 300
ccngttttcc cttngccccc ccaaatttca aaan 334

<210> 1381
<211> 422
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 58, 105, 265
<223> n = A,T,C or G

<400> 1381
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt tttatttnca 60
atgcttcgtt tctagctatt ctgtgctcat ttccacctga aaganaaaat aatactatct 120
atagctgaga ttcatattat ggaatagtaa tttattctat atctgtaact tttaaaaagt 180
cataattaca tcaatgcaca tgtaagttaa gggagttatt tgtttttcaa agaaggcgtc 240

cacagttcga ctttaaataa gttgngtagg aacactacat ctgttctcaa gggattccac 300
caaatacttt ttggtgcttc ctttaaaact gccaccagag ccactttaca aggtataaac 360
agggtttggg aggccctata ttatacctca ttttcaccca aacgtattgc cctttgcatt 420
tt 422

<210> 1382
<211> 406
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 24, 29, 32, 50, 54, 67, 76, 79, 93, 99, 100, 126, 174, 238, 244, 335, 347, 353
<223> n = A,T,C or G

<400> 1382
caattttgga aaattcccgc aagntaaanc gnttttcagg gagatttatn tcgntttaat 60
acccccntag cgaggncgng ggcgatgtac aanaactann tggttgtggt ggcgctcgcc 120
tgtagnccca gctactcggg aggctgaggc aggataattg cttgaacctg gcangcagag 180
gttgcagtga gccgagatcg cagtcactgc actccagcct ggcgacagag cgagactncg 240
cctngggaaa aaaaaaaaaa atccttaaca gctgagaatg gctagagttt aggcgctgca 300
cactggcaag cagctccttt gaccccaggc acttnactcc tcatttntct ctnaacaagg 360
cagccagcaa ggatcctgga gtcacagggt gtgagatgcg aaaaaa 406

<210> 1383
<211> 393
<212> DNA
<213> Homo sapiens

<400> 1383
aggtaccaac tgggaccgtt gaaactgttt agcctttgtg gcaagaaatt ccgatttcat 60
ttcaactcct gcttgttgta gaattgactt tgccacaggt ccaactgtaa tatcatgtgg 120
gtttacagaa ttaacaatta catctgccgt ctgccattca atgtggccct ggacaatctg 180
gagggtcagg ttgttcacga ccattgcatt gaaagaaggg gtggtttctt gtcccagctc 240
actcttccct aggatgaatt ctgaagcagc tttaaaggca gcaacagtag ggtcctcatt 300
gctcaccagg tgaatttctt tcaaattact catcattggc ttccttgcaa actaacccgg 360
atagtctcta caatagtctt tgtacctgcc cgg 393

<210> 1384
<211> 274
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 1, 9, 18, 28, 29, 32, 33, 53, 56, 64, 66, 69, 77, 113, 115, 117, 161, 173, 194, 198, 206, 219, 236, 242, 245, 248, 249, 260
<223> n = A,T,C or G

<400> 1384
nccctttcna gcggccgncc gggcaggnnc annttcactc acatgtggct ctnggntgta 60
ttcngnagng ggcatcntga cccacatgat caaatgcccc agagttcact ctntntntga 120
agagctccgt gtctactaag aggtctgatt ccctacatgc nggccagtat gtnggaatga 180
aatgtgtcac taancgtnaa aataangcac tagcaaatnc agaaccttga aaagtnaaac 240
tnatnccnnc caagggcttn atttttcagg ggcc 274

<210> 1385

<211> 310
<212> DNA
<213> Homo sapiens

<400> 1385
ccctttcgag cggccgcccg ggcaggtacg cggggaggca ttgaggcagt cagcgcaggg 60
gcttctgctg agggggcagg cggagcttga ggaaaccgca gataagtttt tttctctttg 120
aaagatagag attaatacaa ctacttaaaa aatatagtca ataggttact aagatattgc 180
ttagcgttaa gtttttaacg taattttaat agcttaagat tttaagagaa aatatgaaga 240
cttagaagag tagcatgagg aaaaaaaaaa aaaaaaaaaa aaggtacctc ggccgcgacc 300
acgctaaggg 310

<210> 1386
<211> 57
<212> DNA
<213> Homo sapiens

<400> 1386
cgctcacaat tcccacacaa cataccgaag ccggaagcat taaagtgtaa aagcctg 57

<210> 1387
<211> 169
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 18, 20, 24, 26, 32, 33, 34, 35, 36, 42, 43, 48, 56, 61, 64, 83, 90, 122, 125, 136, 143, 145, 147
<223> n = A,T,C or G

<400> 1387
cccttaccag cggccggncn gacngncact tnnnnncact gnnggggncc attgtnactg 60
ncanggaata cttgaaaggt cangtaactn acacttctgg agagaccatt caaggcttgt 120
gnctnttgac aaaaanagac cantngngca atgaaaagga gagaattct 169

<210> 1388
<211> 57
<212> DNA
<213> Homo sapiens

<400> 1388
cccttagcgt ggtcgcggcc gaggtacaca gaacttgaaa tttgcaaaag aaggaga 57

<210> 1389
<211> 46
<212> DNA
<213> Homo sapiens

<400> 1389
ccctttcgag cggcccgccc gggcaggtgc tttttttttt tttttt 46

<210> 1390
<211> 86
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature

<222> 19, 32, 54, 60, 67
<223> n = A,T,C or G

<400> 1390
ttcccttagc gtggtcgcng ccgacgtaca cntggacctg ctggcattcg aggncctcan 60
ggtcacnaag gccctgctgg cccccc 86

<210> 1391
<211> 27
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 2
<223> n = A,T,C or G

<400> 1391
anaattcgcc cttagcgtgg tcgcggc 27

<210> 1392
<211> 86
<212> DNA
<213> Homo sapiens

<400> 1392
acattcatgt taatccaggg agcaaggtaa agctgtcact ttcattattc acatgaccac 60
gaaaataaat tgtatttttt tttttt 86

<210> 1393
<211> 95
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 17, 18, 24, 26, 28, 37, 44, 45, 49, 53, 59, 66, 77, 81
<223> n = A,T,C or G

<400> 1393
cccttaccag cggccgnncc gacngncnca attactncta tttnnaatnt acnaagganc 60
aaacanctac aggattnagg ncggaccgaa tgggt 95

<210> 1394
<211> 74
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 21, 25, 34, 42, 62
<223> n = A,T,C or G

<400> 1394
agcgtggtcg cggccgaggt ncatnctaac aaanatgaaa tnctatgtta aatctactaa 60
cnctttgcct gcca 74

<210> 1395
<211> 151

<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 59, 70, 99, 100
<223> n = A,T,C or G

<400> 1395
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt ttttacggnt 60
tttatttttn aatttttatt ttggttttct tacaaaggnn gacattttcc ataacaggtg 120
taagagtgtt gaaaaaaaaa attcaaattt t 151

<210> 1396
<211> 90
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 14, 18, 23, 41, 42, 44, 63, 80
<223> n = A,T,C or G

<400> 1396
ggtatgcttg accntagngc tancatcttc tttacaattt nnanaaggca gaggatgaag 60
acnaaccaag aggctactgn cattgaattt 90

<210> 1397
<211> 107
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 15, 19, 21, 29, 64, 65, 80, 90
<223> n = A,T,C or G

<400> 1397
agggaggaaa ggganaaana natgacaana gcaagacaca agaaatgcag caataagcac 60
acannactca cacactgacn ctaatctggn gcaggccatc ctcttac 107

<210> 1398
<211> 178
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 131, 145, 155, 156, 157, 162, 163, 165
<223> n = A,T,C or G

<400> 1398
cccttcgagc ggccgcccgg gcaggtactt tctttttttt tttttttttt ttttattttt 60
tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttt 120
ttttttgggg naaaaagggt ttttntttttc ccccnnnttc cnncntttta tttttttt 178

<210> 1399
<211> 156
<212> DNA

<213> Homo sapiens

<220>
<221> misc_feature
<222> 61, 71, 72, 75, 82, 84, 85, 86, 93, 94, 98, 109, 110, 117, 133, 134
<223> n = A,T,C or G

<400> 1399
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt tttttttccc 60
nttaaaaaaa nnacntccaa tngnnntcaa ccnngggnaa aaaaggggnn gggggtnttt 120
taaggggaaa aannaaaaaa aaaaaaaggg tttttt 156

<210> 1400
<211> 263
<212> DNA
<213> Homo sapiens

<400> 1400
ccctttcgag cggccgcccg ggcaggtaca tgtgcatgtt tttacatggg tatatggcat 60
actggcgggg actgggcttc tagtgtatct attccccagc tagtgaacat tgaacctata 120
ggtaattttt caacccttgc ccccctcccc actctcctcg cttttggcat tcccagtatc 180
tattataagg cttgggtttt aatatacctg cttctgcact gagtctgtgg accagggtac 240
ctcggccgcg accacgctaa ggg 263

<210> 1401
<211> 187
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 28, 31, 32, 33, 47, 54, 63, 64, 65, 75, 79, 80, 82, 83, 87, 90, 91, 92, 98, 101, 104, 105, 106, 107, 108, 109, 110, 113, 114, 115, 118, 119, 120, 121, 125, 126, 127, 128, 132, 135, 138, 142, 145, 146, 147, 151, 154, 156, 164, 165
<223> n = A,T,C or G

<221> misc_feature
<222> 166, 170, 174, 175, 186
<223> n = A,T,C or G

<400> 1401
actttttttt tttttttttt ttttaaancc nnnaaaaaaa aaaaaanttt cccnattttt 60
ttnnnagggg ttttntggnn anngggnaan nngggggntt nggnnnnnnn aannnttnnn 120
ncccnnnntt tnaanttncc cnggnnnaaa naangnaacc cccnnntttn aaannaaaaa 180
aaaaang 187

<210> 1402
<211> 104
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 48, 52, 53, 57, 63, 66, 72, 73, 74, 76, 77, 78, 87, 89
<223> n = A,T,C or G

<400> 1402

cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttttngc cnnaaanggg 60
ggnaangggg gnnntnnngg gaaaaancng cccctttta aaaa 104

<210> 1403
<211> 180
<212> DNA
<213> *Homo sapiens*

<220>
<221> misc_feature
<222> 56, 57, 58, 61, 62, 65, 66, 67, 70, 71, 76, 79, 80, 81, 89,
91, 92, 95, 102, 103, 104, 105, 106, 118, 123, 124, 128,
132, 138, 140, 141, 144, 145, 147, 149, 159, 160, 167, 168,
169
<223> n = A,T,C or G

<400> 1403
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt tttgannncc 60
nnccnnnaan naaaanaann nttttgggnc nnaanttttt tnnnnnttaa aaaaaaanaa 120
acnnaaantt tnaaaaanan nccnntntnt ttttttttnn gggggnnna aaaaaaaaa 180

<210> 1404
<211> 85
<212> DNA
<213> *Homo sapiens*

<220>
<221> misc_feature
<222> 17, 26, 29, 32, 40, 41, 60
<223> n = A,T,C or G

<400> 1404
acccttgcct ttgaatnatt tatatnctna tntttcttgn ncccagactt tgtccttcan 60
tgcactgagt caaagcttta cacta 85

<210> 1405
<211> 108
<212> DNA
<213> *Homo sapiens*

<400> 1405
ccctttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt tttttggttt 60
tttttttttt tttttttttt tttttttttt tttttttttt tttttttt 108

<210> 1406
<211> 46
<212> DNA
<213> *Homo sapiens*

<400> 1406
ccctttcgag cggccgcccg ggcaggcact tttttttttt tttttt 46

<210> 1407
<211> 48
<212> DNA
<213> *Homo sapiens*

<400> 1407

cccttttcgag cggccgcccg ggcaggtact tttttttttt tttttttt 48

<210> 1408
<211> 47
<212> DNA
<213> Homo sapiens

<400> 1408
cccttttcgag cggccgcccg ggcaggtact tttttttttt ttttttt 47

<210> 1409
<211> 48
<212> DNA
<213> Homo sapiens

<400> 1409
cccttttcgag cggccgcccg ggcaggtact tagttttttt tttttttt 48

<210> 1410
<211> 58
<212> DNA
<213> Homo sapiens

<400> 1410
cccttttcgag cggccgcccg ggcaggtact tatatttttc tttttttttt ttttttttg 58

<210> 1411
<211> 57
<212> DNA
<213> Homo sapiens

<400> 1411
cccttttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt ttttttt 57

<210> 1412
<211> 51
<212> DNA
<213> Homo sapiens

<400> 1412
cccttttcgag cggccgcccg ggcaggtact tttttttttt tttttttttt t 51

<210> 1413
<211> 42
<212> DNA
<213> Homo sapiens

<400> 1413
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tt 42

<210> 1414
<211> 49
<212> DNA
<213> Homo sapiens

<400> 1414
cccttagcgt ggtcgcggcc gaggtacctt tttttgtttt cctttttttt 49

<210> 1415

<211> 46
<212> DNA
<213> Homo sapiens

<400> 1415
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt tttttt 46

<210> 1416
<211> 43
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 8
<223> n = A,T,C or G

<400> 1416
ccctttcnag cggccgcccg ggcaggtact tttttttttt ttt 43

<210> 1417
<211> 212
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> 47, 51, 63, 64, 65, 71, 76, 77, 79, 80, 81, 83, 84, 85, 87,
88, 89, 90, 97, 99, 100, 107, 108, 110, 112, 113, 127, 142,
143, 144, 145, 148, 151, 165, 166, 169, 178, 185, 186, 187,
188, 193, 197, 198, 199
<223> n = A,T,C or G

<400> 1417
cccttagcgt ggtcgcggcc gaggtacttt tttttttttt ttttttnggg naaaaaaaat 60
ttnnnttttt nccccnngnn ngnnngnnnn ggggccntnn aaatttnntn gnnccccccc 120
cccccccnttt aaaaaaattt tnnnnccnta nccccccaaa ttatnnggnt taaaaggntt 180
tgccnnnntc ccngggnnnt tttttttttt ta 212